

MANUFACTURERS' RECORD.

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BALTIMORE, FEBRUARY 14, 1901.

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Manufacturers' Record.

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THOMAS P. GRASTY, Vice-President.
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COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week. For the first issue in the month we should receive copy by Friday Morning of the week preceding.

What He Found in South.

Star Brass Works,
Manufacturers of Whitewash and Cold-
Water-Paint Spray Pumps
And Dealers in
Fireproof Paint for Inside Work Only.
67-69 South Canal St.,
Chicago, Ill., January 29, 1901.
Manufacturers' Record Publishing Co.,
Baltimore, Md.

Dear Sirs:—* * * The writer has been out of the city for a few weeks traveling through the South.

I found business very good while down there, and also found your paper in a great many places, and always gave you the greatest send-off I could, for I have found your paper to be as good a paper as I ever advertised in, and I have tried a great many in my time.

You will find one of our new catalogues enclosed, which we have just got out. If any of your friends want any we have plenty to give away. Very respectfully,
THE STAR BRASS WORKS,
JOS. BINKS.

Our Manufactured Exports.

In 1890 the total exports from the United States of the manufactures of iron and steel amounted to \$27,000,000. By 1897 this increased to \$62,737,250. When 1899 showed a total of over \$100,000,000 it was thought by many that we had reached the limit of our exports of iron and steel for the time-being, and that higher prices would retard further development of the export trade. But the bureau of statistics, in its report just issued, shows that the exports of the manufactures of iron and steel for 1900 reached \$129,633,480, or \$102,000,000 more than the total in 1890. An analysis of the report shows an increase in 1900 in every important article. In pig-iron the total was \$4,500,000, against \$3,250,000 in 1899 and \$2,500,000 in 1898. Builders' hardware shows a gain of about \$1,000,000 over 1899 and \$2,000,000 over 1898. Steel-rail exports amounted in value to nearly \$11,000,000 in 1900, against about \$6,000,000 in 1899; electrical machinery increased from \$2,500,000 in 1898 to \$5,250,000 in 1900, while sewing machines increased from \$3,000,000 in 1898 to \$4,500,000 in 1900, and type-

writers from \$2,000,000 in 1898 to nearly \$3,000,000 in 1900.

The destination of the articles of American manufacture, and especially of machinery, is, as shown by the bureau of statistics, literally to every part of the world. Our sewing machines, typewriters and scientific instruments go to Asia, to Africa and to the islands of Oceania, as well as to Europe, notwithstanding the experience and skill of European workmen. Of the \$6,788,000 worth of instruments for scientific purposes, including telephone and telegraph instruments, over \$1,000,000 worth went to the United Kingdom alone, nearly \$1,000,000 to France and \$500,000 to Germany. The United Kingdom and Germany each take over \$1,000,000 worth of our sewing machines. Over \$1,000,000 worth of typewriters go to the United Kingdom and \$500,000 to Germany. Of the total exports of builders' hardware, amounting in value to \$9,782,000, over \$2,000,000 worth went to Great Britain, nearly \$1,000,000 to Germany, about \$500,000 to France and another million dollars to other European countries. Of the \$10,895,000 of steel rails exported in 1900, over \$1,000,000 worth went to Europe and nearly \$4,000,000 worth to British North America.

The growth of our export trade by countries between 1890 and 1900 is shown in a table published by the United States bureau of statistics. These figures bring out very strikingly the advance made in our trade with different countries:

Exported to—	1890.	1900.
United Kingdom.....	\$434,468,505	\$602,221,375
Germany.....	91,321,216	197,603,400
Canada.....	38,629,367	102,900,250
Netherlands.....	25,541,189	83,721,501
France.....	49,741,216	82,553,335
Belgium.....	27,779,056	46,929,953
Mexico.....	15,322,796	38,270,933
Italy.....	15,272,805	36,731,704
British Australasia.....	11,651,398	28,163,722
Cuba.....	13,329,493	26,934,524
Japan.....	5,072,038	26,492,111
China and Hongkong.....	9,686,248	20,459,385
British Africa.....	2,953,335	19,190,668
Denmark.....	4,325,351	15,499,371
Spain.....	12,471,516	15,200,917
Sweden and Norway.....	4,479,253	11,530,574
Brazil.....	12,902,356	11,516,681
Argentina.....	4,540,403	11,095,538
Russia in Europe.....	9,490,439	8,498,950
British West Indies.....	9,094,474	8,630,347
Austria-Hungary.....	1,171,603	7,657,019
Portugal.....	4,798,843	5,705,179
British East Indies.....	4,662,472	5,527,032
Chile.....	3,625,283	4,586,525
Havti.....	5,907,514	3,720,279
Philippine Islands.....	153,904	3,523,146

Total, including other countries not herein specified..... \$857,502,548 \$1,477,949,170

The Manufacturers' Record publishes letters from several Southern business men in advocacy of the ship-subsidy bill, and applauds these gentlemen as being "broad enough to rise above sectional feeling and party affiliation." It may be much more aptly said that they are narrow enough to sink to the level of a desire for paltry temporary advantage to some peculiar interests they may have, at the sacrifice of what they believe to be the true principles of government.—Charleston (W. Va.) Gazette.

Oh, well; just as you please. But does the editor of the Charleston Gazette claim that the men who are leading in the South's development have no patriotism, but that it is all represented in himself? Is he quite sure that these men are not his equal mentally and morally? That is about the meaning of such silly stuff.

EXPANSION, CUBA, SHIPPING—THREE GREAT QUESTIONS.

Ex-Governor MacCorkle of West Virginia, a democrat of national reputation, in this issue of the Manufacturers' Record deals with the expansion of our commercial interests, now the dominating question of the world, and the relation thereto of Cuba as the key to the situation. Governor MacCorkle in a very graphic survey of the situation points out that the business conditions of the world are rapidly changing, and that under this wonderful development of commercial life a crucial condition confronts this nation. "The opening of new fields of commerce by the world movement of today has," he says, "swept away the mighty conditions of the past and has placed before the American people new and trying economic and political relations." "This country," he adds, "has entered upon a new epoch of its commercial life, and assuredly must it be prepared for the exigencies, misunderstandings and complications inevitably resulting from this newer and broader contact with the world. We have departed from the olden days. With whatever regret we may look back upon that time of peace and quiet, it can no longer be concealed that we have passed away from it. We are today in the midst of the turmoil of the world, and must face the world conditions of the period. The present condition was inevitable, for progress is inexorable and admits of no delay in settling its policy."

This is pre-eminently true. We must face the problems of broader commerce and more complicated relations with the world. In May, 1898, in forecasting this condition, the Manufacturers' Record, under the heading "A Nation Born in a Day," said:

"Willingly or unwillingly, for good or forevil, but we hope for good—our own and the world's—this country has entered upon a new period in its history. We have laid aside old things and suddenly stepped into the world's arena, no longer a country unto itself, but a country of infinite wealth, infinite possibilities, hesitating for a moment in accepting the new responsibilities placed upon us by Divine Providence, and yet ready to meet the emergency. As in the life of an individual there sometimes comes a great crisis, when he would fain shirk new responsibilities and new duties, but which destiny forces upon him, and which, if he has true manhood in him, develop and strengthen his character and fix his future, so our country faces new duties and new responsibilities from which it would gladly be relieved, if it could be done with honor. But the Providence that has led us through the past, that has saved us from internal destruction and for many years from external troubles until we have attained our present commanding position, has, we believe, destined the United States to be the dominating power in the world, and this war is but the means to the end.

"Civilization advances on the wreck and ruin of the past; life develops through death itself, and the history of the world, secular and religious, teaches that oftentimes war, with all its horrors, all its destruction of life, is but the foundation for advancement. From the Revolutionary War to 1865 our own history emphasizes this. This war means a broader and deeper patriotism; it means the death of the clamor of masses against classes, the end of sectional strife, a vast expansion and broadening of every phase of national life and the development of higher individual character. As a man broadens with new responsibilities, so does a nation, if it has inherent strength, and so our entry into the world's affairs widens our horizon, enables us to see that we have new duties to perform and nerves us for the work of civilization that is before us.

"What this change means in trade expansion at home and abroad can scarcely be comprehended now. First, it means a great navy and a great mercantile marine, taxing for years to come the utmost capacity of every shipyard—two things alone which are of incalculable value to our business interests; the construction, with the utmost speed, of the Nicaraguan canal under American control, and to the South this canal will annually add greater wealth than its entire cost; the development of Cuba, and by good sanitary measures the practical elimination of the danger to the South from that country of yellow fever; the establishment of coaling stations in the Pacific and the control of a large part of the trade of the Eastern world.

"Truly we are living in a wonderful time, when it may almost be said that Dewey fired a shot that made it possible to see the fulfillment of Scripture in that 'a nation shall be born in a day.' This nation has had a new birth, and it enters upon its new life with a glorious future—a future of great responsibility, of tremendous progress, of peace and prosperity among our own people, an end of the cry that the rich have no patriotism, a united people and a united country, taking our place as the foremost nation of the world in the advancement of civilization and in the extension of trade."

What the Manufacturers' Record then outlined as the possibility of the future Governor MacCorkle very pointedly describes as the situation of today. Picturing this advancement of the United States, he takes the position that from the commercial point of view Cuba holds the strategic position in our future development. On this point he takes advanced ground, and, without regard to whether his views are in harmony with republicans or democrats, he discusses this great question from the point of view of our commercial devel-

opment and expansion. And on commercial expansion rests the very life of our nation.

It is appropriate in connection with Governor MacCorkle's survey of commercial expansion that we publish the brilliant speech of Senator McLaurin of South Carolina, delivered in the United States Senate last week, on the importance to the South of a merchant marine. Taking as his text the resolution passed by the Cotton Spinners' Association of the South last May, demanding the enactment by Congress of legislation in aid of American shipping, he reviews the cotton industry of the South and its influence upon the progress and prosperity of that section. He aligns himself with the most progressive business men of the South, with the cotton manufacturers who passed this resolution, and with the manufacturers of iron and the workers of wood and other products, who have been equally emphatic in demanding that the representatives of the South in Congress should view these questions not from their political affiliations of the past, but from the standpoint of the necessities of business advancement in the South. He points out how the destruction of the war and the greater horror and the greater evil of reconstruction so embittered the South that its people naturally opposed every policy or doctrine advanced by the republican party, and that, therefore, when the republicans advocated protection the people of the South naturally became more intensely free-trade than they were before; when the republicans proposed ship subsidies, the South fought bitterly for free ships. And he adds: "This was natural, but it was not statesmanship. The time has come now when the South, following in the lead of its great business interests, can afford to put aside the animosities of the past and take up the work of the Old South, and when its political leaders should rightly stand shoulder to shoulder with its business men and strive to advance measures calculated to upbuild its prosperity, without regard to whether they are advocated by republicans or democrats."

We believe that every honest thinking man of the South must agree with Senator McLaurin in this platform. Every man has a right to his own convictions, and some may differ with him as to whether government aid to shipping is a wise thing or not, but they must give him credit for this broad platform of working for the upbuilding of the South, and for any measure which, in his opinion, is of value to the agricultural, industrial and general business of this section, as in the view of the great business leaders of the South the shipping bill unquestionably is. The man who in public life ignores his personal interests and his party affiliations, and with the courage of his convictions dares to do that which he believes to be right and to stand for the best interests of his section, is the man whom the South and every man in the South should delight to honor. The truckling politician, who looks only to his own interest, but dare not show the courage to step out of party traces, even on a question of supreme importance to his own section, is not the man that the South should honor. The business leaders of the South have persistently urged that the South's representatives in Congress should advocate the shipping bill, and Senator McLaurin, heeding their voice, has taken his stand for it. It is incumbent now upon those for whose interest he is pleading, the manufacturers, the merchants and the farmers of the South, for the prosperity of the manufacturer means the prosperity of the others, to show their appreciation of Senator McLaurin's stand. Today he represents the progressive element of the South—he is the champion of their cause. The professional politicians in the South thrive as nowhere else in this broad land. They constitute a class who live entirely by politics, and hence in Congress the business interests of that section are often subordinated to political effect. While McLaurin was a member of the ways and means committee of the House he made a speech very much like the one under discussion, claiming that the South was entitled to her share of the benefits of a protective tariff, and proposing protection for Southern rice, cotton and lumber. The recent speech is but the logical outcome of the position taken then. It is in conformity with a broad, far-seeing policy in political affairs that is obtaining in the industrial development of the South, and which, if followed, will not only restore the South to her former position of political influence, but will vastly develop her commercial power. The Manufacturers' Record would urge its readers to give a very careful reading to his speech and to Governor MacCorkle's article.

Investment, Not Charity.

In submitting to the legislature the biennial report of the North Carolina College of Agriculture and Mechanic Arts Governor Aycock sent a message strongly urging wise treatment by the legislature of the college needs. These are urgent. Its accommodations are by no means adequate to the demands of students; the college has no chapel, and \$8000 or \$10,000 worth of textile machinery given to the college by friends is now largely unused and valueless for lack of a suitable textile building and motive power. The governor points out that the college, the only one of its kind in the State, is endeavoring to train young men to skilled labor in various agricultural and mechanical trades, occupations and professions, so as to meet the large and increasing demand of the State for skilled workmen—mechanics, machinists, engineers, electricians, dairymen, stockmen, truckers, textile workers and educated farmers. He truly says that

the college is not a philanthropy, but an absolute necessity and a valuable investment.

Much that passes for philanthropy is an effort to mitigate human ills. By extra assessment upon individuals or the community the attempt is made to ease the suffering due to social diseases. The true philanthropy is to be found in a policy which will prevent the diseases. The policy that will enable men and their families to be independent of charity, and will so develop all the activities and possibilities of a State that the wastefulness of so much charity will cease, is the correct one. The provision for the proper training of the rising generation to meet the industrial requirements of North Carolina as well as of other States is, as Governor Aycock says, not philanthropy. It is a wise investment. The expenditure will be returned an hundredfold in the steady development of the State and in increasing happiness of its people, able to do with their might what their hands find to do.

CUBA: THE KEY TO AMERICAN COMMERCIAL EXPANSION.

By William A. MacCorkle, Late Governor of West Virginia.

As a natural sequence of conditions not necessary here to discuss, commerce and commercial affairs are no longer moving on local lines. They are advancing by international and world movements. Commerce has gone into the wholesale business, and has entirely changed the conditions of its being. With this new and wonderful development of commercial life a crucial condition today confronts this nation, the vigorous energy of a people able to meet all of its needs by exertion during four months of the year, the filling up of our waste places, the peopling of the fields, the mighty strengthening of our economic forces more than equaling in their productive ability the similar forces of all Europe. The opening of new fields of commerce by the world movement of today has swept away the mighty conditions of yesterday, and has placed before the American people new and trying economic and political relations. Production must be increased, that the workmen may labor during the whole year, and markets must be provided, that this production may find ready sale, for if these conditions do not obtain the workmen must be idle, business must be reduced in volume and a free people's energies restricted and limited. These conditions are each alike abhorrent to the Anglo-Saxon. With the increasing volume of the world's commerce the virile genius of this people cannot either retrogress or be stationary. The increasing surplus must be provided with an outlet, and the genius of this people must have a free hand in the markets of the world. I am but expressing the veriest truisms of our commercial existence. As a great writer says:

"The upshot of the whole matter, therefore, is that America has been irresistibly impelled to produce a large industrial surplus—a surplus, should no change occur, which will be larger in a few years than anything ever before known. Upon the existence of this surplus hinges the future, for the United States must provide sure and adequate outlets for her products, or be in danger of gluts more dangerous to her society than many panics such as 1873 and 1893."

Then around the question of the surplus hangs the danger of today, for without the movements necessary to produce the surplus there is idleness and dissatisfaction and want, and with the surplus, unless it is well sold, there is overproduction, which is equally dangerous to the society. Where will this surplus go? To whom



CUBA AND THE AMERICAN MEDITERRANEAN.

will it be sold? There are but two portions of the world where there is hope for great development of trade by the sale or exchange of our productions. These sections of the globe are South and Central America and China. The rest of the world has been largely pre-occupied by our commercial rivals, and the Central American trade peculiarly belongs to this country. It is part of our continent, and is within easy reach of our manufacturing centers. We produce that which the economy of nature has not given to these otherwise favored sections. China is the other region affording an opportunity for the sale of our surplus. As a well-known writer says:

"The expansion of any country must depend upon the market for its surplus product, and China is the only region which now promises almost boundless possibilities of absorption, especially in the way of iron for its railroads."

These markets are the markets now sought by the increasing commercial energy of Continental Europe and England. The whole energies of these people are directed to seizing harbors, building railroads, encompassing commercial zones, holding strategical points, exploiting means of access to market, and demanding peculiar and favorable conditions of trade. American trade must at last look in the face the dangers of a European commercial coalition. Whatever may be the kindly civil relations between these two great commercial sections of the world, underneath these pleasant relations lurks a bitter commercial jealousy. This coalition within a few years will become apparent. It is inevitable, because we are taking the trade from the manufacturing centers of Europe, and bread and money from its peoples.

European commercial and selfish political restrictions dominate every country where their peoples are entrenched. These restrictions control Africa from Morocco to the Cape of Good Hope. They bind a whole continent. Russia is turning back the maritime trade of the world with the East by her trans-Siberian railroad. Germany is laying her heavy hand upon Asia Minor and Turkey and China, whilst England and France are placing the steel rail on Africa's gaunt bosom, and the ultimate intention of all of these nations is to control and dominate China.

China has projected and under operation six lines under English control, one Anglo-German, one Anglo-Italian, two German, four French and one Franco-Belgian and four Russian lines. It is idle to say that this expenditure of vast sums of money does not carry with it the political and commercial control of the countries in which it occurs. Therefore, it is fundamental that we, hampered in this race by our governmental policies forbidding us to engage in this policy of commercial gov-

eramental acquirement, must preserve at all hazards and at every cost our outlets of trade and our maritime advantages.

This country has entered upon a new epoch of its commercial life, and assuredly must it be prepared for the exigencies, misunderstandings and complications inevitably resulting from this newer and broader contact with the world. We have surely departed from the olden days of quietude and isolation. With whatever regret we may look back upon the olden time peace and quiet, it can no longer be concealed that we have passed from the zone of its influence. We are today in the midst of the turmoil of the world, and must face the world conditions of the period. The present condition was inevitable, for progress is inexorable and admits of no delay in settling its policies. Then facing the problems of a broader commerce and more complicated relations with the world, it seems to me that the fundamental commercial condition of the day demands that this country should dominate, strategically, commercially and actually, the Gulf of Mexico and the Caribbean Sea. I am profoundly impressed with the truth of this observation. I believe that it is today the most vital principle of our commercial life. These seas are American seas, and so far as political or physical or commercial power affects the commercial situation, they should be in every sense of the word under the control of this country. The vast rivers of the New World, the Amazon, the Orinoco and the Mississippi, with their wondrous valleys filled with all of the needs of mankind, practically flow into their broad bosoms. Their waves wash the shore lines of our States. Their islands strategically dominate the Mississippi and control in every direction the lanes of American commerce. To interfere with or impede the trade of the Mississippi valley would affect the lives and stagnate the business of 35,000,000 of people. In no sense would its effect be local, but practically it would affect the whole country. These seas control within their borders every phase of American commerce. The trade within the immediate control of these seas is the easiest trade for us to conquer.

"Nature has created nothing upon our continent more stupendous than these waters, and they are as much characteristic of the great American republic as the institutions, policy, the liberty which distinguished it from all the nations of the earth."

With the building of the Isthmian canal these waters will be again the most populous on the globe, and will be the center of the carrying trade of the world. Is it not the principal part of the wisdom of a far-seeing people to acquire control of the islands of these seas, which carry with them the essentials of our commercial life, and which exercise such potent influence in the development of our trade with the world? Some of them are in the control of the weaker nations of Europe. Shall we allow them to be changed in the hands of our powerful rivals? Can any words of mine add to the transcendent importance and necessity of their acquirement by this country? Through these American seas must pass our growing commerce to the Western coast, as well as the commerce to China, South America and the Pacific. Consider for a moment the strategical and commercial situation. Everything shipped from the Northern ports to the Gulf of Mexico must pass through the straits of Florida, between Cuba and Florida. Cuba absolutely dominates these passes. Every vessel through the Isthmian canal, with its wealth of American commerce, must pass between Hayti and Cuba, or between Hayti and Porto Rico, and every passage into the canal is controlled by the English island of Jamaica and the Windward Islands. With this power to destroy and control our commerce, should not every energy of this country be directed to controlling as absolutely as possible the islands of Cuba and Hayti, and the purchase and the possession of the islands of the Caribbean Sea and the Gulf of Mexico, now held by the commercial nations of the world? This country should not allow a coaling station owned by a foreign nation within striking distance of this continent. I repeat that our growing commercial importance will surely bring about coalition against us, and if we are not vigilant, as surely the jealousies of the world will have their full play to our detriment and our injury.

Is it not time that we should sternly warn European nations that we will consider the acquiring by them of the islands of the Gulf of Mexico and the Caribbean Sea as an unfriendly act to this government? Should not Germany today be warned that the United States will not permit her to purchase the Dutch island of Curacao, with its strategic advantages? Shall it be the policy of the American nation to allow longer the continuance of the outposts of the strong commercial nations at our doors and practically upon our coast line? Shall we give up that which we have the power to control? Shall we longer sleep when the nations of the world are eagerly grasping every great advantage? Says Mr. Benjamin Kidd:

"It is probably true, however strange it may appear to say so, that at the present day the far-reaching effects of the part which the English-speaking peoples are probably destined to play in the future are not so much thought of, or even so clearly perceived, either in England or in America, as they are by some of the more far-seeing minds in France and in Germany." If such has been the case with us in the past, should we not take warning for the future?

Then, in view of the critical situation of the day, what shall be our manifest duty in view of the important bearing of the island of Cuba upon the American life and American commerce, with all of its far-reaching effects upon the world? Shall we allow this island to be the potent instrument of the nations of the earth, to be used to hinder and impede the development of American commerce? To leave it without the rights of this country protected by organic instrument inevitably invites that unsatisfactory state of affairs. The manifest jealousy of the Cuban leaders towards the United States only too clearly foreshadows the condition which will within a short time surely follow. Reasoning from the past, this island will be the seat of internecine conflict, and with the building of the canal its vast physical, strategical and commercial importance will be the center of attraction to the commercial and powerful nations of the world. Consider the consequences of the play of the nations of the world upon the mercurial and unstable people composing the bulk of Cuba's population. What tie or political relation could be depended upon? What commercial policy would be persisted in? What reliance could be placed upon any policy of those who are likely to govern its destiny and control its political and commercial relations? We were safer with Spain.

When the United States went to war with Spain they did not anticipate such outcome as this I have indicated, nor will our people, after their prodigal expenditure of blood and treasure, tolerate a political result which will place at the mouth

of their greatest river, in the sight of our shores, an island which may be dominated physically and politically by the nation with whom we at that moment may be waging war, political, commercial or actual. These are plain words, but the transcendent importance of the situation demands the plainest speech. Any fair regard for the safety and the commerce of this nation demands that Cuba cannot and must not possess the attributes of sovereignty. The situation demands that we shall break no promises, that we shall not make undue haste, but common foresight and prudence demands that Cuba's rights at this time to make foreign treaties, to regulate foreign trade, to construct a navy, to make political alliances with foreign nations should only be with the consent and under the control of the United States. The deep, underlying sentiment of the American people, backed by every dictate of common prudence, demands that Cuba shall be an integral part, politically and commercially, of the United States of America.

In this crisis of our relations with Cuba this rational result should be the aim of every citizen who loves the greatness of this country and values its welfare, its peace and its settled commercial policy. Is it not time to take our bearing? Are we not allowing sentiment to overvalue the welfare, the peace and happiness of this great nation? I am demanding no conquest; I am not enunciating any new doctrine or policy; I am not encouraging the breaking of any resolutions, however foolish they may be, but I am solemnly enunciating a proposition which has from time immemorial been the policy of the people composing this government. This principle is vital to our welfare. The power of this island for evil or good to us is transcendentally important to this people. That Cuba ought to be a part of this government has been the opinion openly announced of almost every great American statesman, whether democrat, federal, whig or republican, and this has been the policy of every rational party. Says Thomas Jefferson, and his words, in view of the fast development of our maritime interests, are of far more importance now to this country than when uttered by the Father of the Constitution:

"Do we wish to acquire to our own Confederacy any one or more of the Spanish provinces? I candidly confess that I have ever looked upon Cuba as the most interesting addition which could ever be made to our system of States. The control which, with Florida Point, this island would give us over the Gulf of Mexico and the countries and isthmus bordering on it, as well as all those whose waters flow into it, would fill up the measure of our political well-being."

John Quincy Adams held this same view. Says this wise statesman:

"Cuba has become an object of transcendent importance to the commercial and political interests of our Union, * * * an importance little inferior to that which binds the different members of this Union together. * * * It is scarcely possible to resist the conviction that the annexation of Cuba to our Federal Republic will be indispensable to the continuance and integrity of the Union itself."

Webster, Monroe, Clay, Marcy, Everett, Jackson and Van Buren seized every opportunity to enforce and reiterate the expressed views of the fathers of the republic, that every interest of this country demands that Cuba should at last be a State of this republic. More than once this government has expressed its determination to call the people to arms in order to prevent any other destiny for this island, and today, when, without violating any pledge; when, in fact, the opportunity is at hand to consummate the traditional desires of this republic, it would be supreme folly, which will be repaid to us in political and commercial unrest, and possibly in blood and turmoil and war, should we not avail ourselves of the rights which are ours by reason of our prodigal sacrifice of American blood and American life?

IMPORTANCE TO THE SOUTH OF A MERCHANT MARINE.

Its Value to the Agricultural, Industrial and General Business Interests of this Section, as Viewed from a Southern Standpoint.

By Senator J. L. McLaurin of South Carolina.*

Mr. President, it is not my purpose to enter into a lengthy discussion of this measure, but I shall confine myself to a simple statement of the reasons which will influence me in my vote upon the bill.

In May last there met at Charlotte, N. C., the most representative body of business men which has assembled in that section during the last twenty-five years. It was the annual meeting of the Cotton Spinners' Association of the South. It represented the entire cotton business from Virginia to Texas, and about 400 or 500 men, the foremost in the South, were there.

No other industry is so thoroughly typical of the South as that of cotton. No other country in the world and no other section of any country has such a complete monopoly of so vast an industry as the South has in the production of raw cotton, and as it is destined to have in the near future in the manufactured product. In that favored section is produced three-fourths of the world's cotton supply, including the value of the seed, which nets to our people more than \$400,000,000, and before it reaches the consumer it

amounts to more than \$2,000,000,000 in the finished product.

Producing, we might almost say, the world's supply of raw cotton, the South is also rapidly developing cotton manufacturing, so that in its own mills it may furnish employment for its hitherto idle hands, and thus create the enormous wealth which New England and Old England and the Continent have made in turning our cotton into the finished product. The men who gathered at Charlotte are the leaders in this great industry. They are the men who are making the South. Where no grass grew before they are making two blades to grow. Where a few years ago there were thousands of idle, unemployed people living in ignorance and in poverty, there are today tens of thousands of well-fed, well-clothed, thrifty, well-paid operatives working in the mills built by these great captains of industry.

These are the men who are creating employment. They are the men who are building towns and cities and giving employment to these operatives, and while educating them and their children they are furnishing a market for all the varied products of a diversified agriculture. It is impossible to exaggerate the influence

*Speech delivered in United States Senate February 6 on "The Importance to the South of an American Merchant Marine."

which the cotton-mill men of the South are having in its material advancement. The most of them are Southern men, men to the manor born; many of them men, too, who proved their devotion to their section on the battlefield from 1861 to 1865. Some of them are men of a new generation, who, coming out of the poverty of that struggle, have taken their position as leaders in this industrial advancement.

No paper would dare decry the supreme importance of the cotton manufacturers of the South to that section, nor dare they ignore the views of the men who are today the leaders in the redemption of the South from poverty. They are as capable of studying economic questions as the politician or the editor, and they are studying these economic questions. With their trade extending into every civilized country; with \$20,000,000 worth of Southern goods exported last year to China and the East; with their fingers upon the financial pulse of the world, they have looked as deeply into these questions affecting the progress of their section and of the country at large as any class of men in this country.

At their meeting in Charlotte, after two days of brilliant speeches, there was not a dissenting voice in public or in private against the following resolution, a resolution having in view especially the bill under consideration, because it was mentioned in nearly every speech that was made. With a ringing cheer these 400 or 500 great captains of Southern industry, representing a business investment of more than \$150,000,000, unanimously resolved:

"That the Southern Cotton Spinners' Association recommend to Congress the enacting of legislation carrying such compensation as will stimulate the development of American shipping interests under the American flag to an extent necessary to handle American commerce on the high seas in time of peace, and which will provide at the same time such transports and auxiliary service as may be needed in time of war."

Mr. President, I know a great many of these men. I might say I know a majority of them personally, and the others I know well by reputation. I know that they are patriots at heart. I know that they are as deeply interested in the welfare of the South and of this country as any man who stands upon this floor. I know that they are doing great work in bringing prosperity to the whole South by the creation of employment. I know that the development of a home market for cotton, in active competition with foreign consumers, has during the last two years had a most marked effect in increasing the price of the staple to the farmer. I know also what they have done in affording a market for the products of a diversified agriculture, so that the farmer may find a market for his fruits, his vegetables, his butter and his chickens and get ready money the year round, and not be dependent, as heretofore, upon a single crop placed upon the market at a given time in the fall.

Other manufacturers, workers in wood, coal, iron and other products, are doing their full share of this great work, this blessed regeneration of a section. But cotton is so pre-eminently the leader in the South that no other industry has so vital an interest. The stand taken by the cotton-mill people in favor of government aid to American ships, the building of the Nicaragua canal, and of improving Southern rivers and harbors is, as far as I am able to learn, fully indorsed by the representatives of other classes.

Mr. President, I have here a number of letters, which I will not consume time by

reading, but which I will print as a part of my remarks, from men all over the South (from my own State as well as elsewhere) upon this subject. Outside of the cotton-mill interest, I further believe that the convention in Charlotte represented the advanced thought of the business people of the South, and it was shown in the great industrial convention held a few weeks ago in New Orleans, La., and it was voiced last week at a meeting in Brunswick, Ga., and its expression will be found in the letters which I shall publish as a part of my remarks.

And right here I want to call attention to a speech on this question which was made before the convention of the Cotton Spinners' Association of the South by the editor of the Manufacturers' Record, from which I am drawing freely in making these remarks.

In this masterly review of the South's traditional commercial aspirations Richard H. Edmonds, whose life-long devotion to the South's upbuilding, whose incalculable usefulness in the South's redemption from poverty not even the most intemperate partisan dare question or gainsay, points out how Louisiana years ago granted a bonus of \$5 a ton for every vessel of more than 100 tons which should be built in Louisiana, and how the State of Alabama granted a bonus of \$4 a ton for every home-built steamer.

He quotes from a legislative report in Alabama that, after reciting how between \$3,000,000 and \$4,000,000 was paid out annually by Alabama's planters for freight on cotton to Europe and imports taken in exchange for cotton, concludes with this question: "If this amount must be paid, why should it not be paid to our own citizens?" I repeat this plea now that sixty years have passed, not for Alabama planters only, but for the cotton-growers of every Southern State.

The resolutions passed in Charlotte (in my opinion) but typify the advanced thought of the great business interests of the South. Moreover, these men are but taking up again the work of the old South. In the palmy days from 1840 to 1860, when the great leaders of thought in the South, the men who have made undying names, were seeking to broaden the business horizon of their section, recognizing that industrial and maritime advancement was essential to permanent growth and prosperity, a dozen or more conventions were held, having for their aim the indorsement of broad national aid to the building of transcontinental railroads, to the establishment of steamship lines to Europe, and to the cutting of an isthmian canal.

Those acts of the legislatures of which I speak, in Louisiana and Alabama, were the outgrowth of those great conventions, over one of which, if my memory serves me right, John C. Calhoun of South Carolina presided.

The thought of the people of the South at that time, from 1840 to 1860, was again turning (as in the early years of the century) to manufacturing advancement, to railroad construction, and to the possibility of developing direct steamship lines from all leading Southern ports to Europe, and this found expression in these great conventions and legislative enactments.

About this time, however, war came, with its utter destruction of all business interests, followed by the greater horror and the greater evil of reconstruction, and it was but natural that the South, embittered by its losses, should oppose every doctrine, without regard to its merits, advocated by the party which it held not only responsible for the war, but, worse than that, for the crimes, blunders and follies of the reconstruction epoch.

It could not have been expected that the people of the South could look with favor upon any policy or doctrine advanced by the republican party, and so when the republicans advocated protection the people of the South naturally became more intensely free-trade than they were before. When the republicans proposed ship subsidies, the South fought bitterly for free ships.

This was natural, but it was not statesmanship. The time has come now when the South, following in the lead of its great business interests, can afford to put aside the animosities of the past and take up the work of the old South, and when its political leaders should rightly stand shoulder to shoulder with its business men and strive to advance measures calculated to upbuild its prosperity without regard to whether they are advocated by republicans or by democrats. Turning, for a moment, from the South itself to the country at large, let us take a survey of the new order of things—the wonderful changes which the past five years have wrought.

Up to 1890 the energy and capital of this country were fully employed in the development of an empire, in the opening up to civilization of the mighty West, in the building of one-half of the railroad mileage of the world, and in the creation of industries to produce at home the vast requirements of an ever-growing population; but when the panic of 1893 caused a halt in our industrial progress and forced the closing down of many manufacturing establishments, the leaders in America's industrial life undertook to find a foreign market for their products. The revolution wrought by machinery, the ability to double and quadruple the productive power of our factories through modern methods, carried production beyond the possibility of home consumption, and the panic of 1893 forced a broad study of the situation. Iron and steel makers, locomotive builders, cotton goods manufacturers commenced to look to other countries for a market.

Five years ago an Alabama iron manufacturer, in spite of the ridicule of friends and competitors, made a shipment of 250 tons of Birmingham pig-iron to Europe. The possibility of a market in Europe for American pig-iron was ridiculed, but out of that initial shipment has grown a trade which last year took from Alabama for export nearly 300,000 tons of pig-iron. We all remember with what amazement we greeted the first announcement of the shipment of steel rails from America to foreign countries, and how every report of an order for locomotives or other finished product was received. But today it may be broadly stated that not a railroad bridge is built on the face of the earth that American iron does not enter into its construction or sets the price therefor.

Ten years ago we exported less than \$30,000,000 worth of iron and steel; and at that time some of the leading economic writers asserted that we had reached the limit of production for many years to come, when in 1899 we exported \$100,000,000 worth; but 1900 shows a further increase of \$29,000,000, or nearly 30 per cent. Mr. President, any man who carefully studies the situation and considers the foundation upon which we are building must recognize that we have scarcely commenced our foreign trade. We are producing more iron and steel than Germany and England combined; we have greater natural resources for coal and iron development than all Europe; we virtually monopolize the production of cotton; we supply Europe with copper, and are furnishing the West Indies, Mexico and South America vast supplies of coal and iron out of our abundant stores.

The time is near at hand when our output of raw and manufactured products will exceed that of combined Europe. We have heard here in this chamber the assertion of an industrial combination of all Europe to meet the competition from our country. Our great trade combinations—call them what you may, aggregations of capital or trusts—are a phase of industrial life the outcome of which no man can forecast. We cannot say that they are all evil, or that they are all good, because they are the inevitable evolution of industry, which has in it much good and possibly some evil.

It was the vast wealth and volume of his trade that enabled Mr. Carnegie to set the price for the world's iron and steel products and to take the lead in making this country the leading metallurgical producer of the world. Only a few days ago Lord Rosebery, in discussing the coming supremacy of America in the world's industrial affairs, said it was largely due to the vast aggregations of capital, which made it possible for us to take the lead. I believe that these aggregations of capital may have in them some seeds of dissolution or some inherent evils that the law may be forced to correct. But we should remember that this is a transition period from one stage of industrial development to another. What the final outcome may be we know not; but we do know that civilization and Christianity are spreading throughout the world as never before, and that in the work of civilization the responsibility for its advancement falls upon the United States.

The old mother country has done a magnificent work. For 100 years she stood as the world's civilizing power, as well as controlling in financial and commercial matters. But in the shifting of commerce the scepter of power in finance and industrial life has passed from Great Britain to the United States. Twenty years ago England was far in the lead as an iron and coal producer; her financial supremacy was unquestioned. Today the United States is producing nearly twice as much iron and steel as Great Britain, and New York dictates the finances of the world. England, Germany and Russia must henceforth seek the aid of New York's financial power to float their securities. No such marvelous revolution in business was ever before seen in the world's history.

The Spanish war was but an incident bringing the world's attention to our new position in international affairs. It was a mere flash-light, showing the position of the United States upon the stage of human affairs. Never before, "since the morning stars sang together," was the struggle for trade so completely the supreme effort of the great nations of the earth. The question at issue is not now so much the "divine right of kings" as where and how to develop trade; and on trade rests the foundation of civilization. The struggle in the Orient is but one of the movements on the great chessboard where the trade of two-thirds of the world's population is at stake.

The opening up of Africa by the English, the new era upon which China has entered, the development of the West Indies and the Philippine Islands are offering industrial opportunities greater in magnitude and greater in their effect upon the human race than ever were the noted battles in history. History has given its praise to the leaders in the world's great battles, but the history of the future will bestow its laurels upon the men who lead as the great generals of industry, for they are but the "way showers" of advancing civilization.

This country, placed midway between Europe and Asia, with a homogeneous

population of nearly 80,000,000 people, unexposed, as in Europe, by the arbitrary laws and regulations of different governments, with greater natural resources than all Europe, producing three-fourths of the world's cotton, with more coal and iron than the rest of the world combined; a country unmatched in the richness of its resources and the possibilities of development, unequalled in its great seacoast, its wonderful rivers and lakes covering about one-third of the fresh-water surface of the earth, is today the dominant power in human affairs. And yet this country, with all of its progress and all of its wealth, with a foreign trade exceeding \$2,000,000,000 a year, is dependent upon foreign nations for carrying 90 per cent. of its foreign trade. This is the one great field to which American energy and American capital must be turned, not only that we may handle our own exports in our own vessels, but that we may be as independent in the world's shipping interests as we are upon the land.

When the African war a year ago forced Great Britain to take out of commerce so many vessels for transport service, what was the effect upon freight rates? There was an advance in freights all along the line. Cotton, corn, wheat and every one of our exports felt it. Fortunately, in the South last year it was not so injurious because of the great advance in the price of the staple, owing to the short crop, but year before last, when cotton was sold by the farmers, as I sold my own crop, for less than four and three-quarters cents, any advance in freight rates would have been keenly felt by our people. What, then, would be the effect of complications in Europe, say, between Germany and England, who carry four-fifths of our cotton abroad? It would force the price of cotton down to the lowest prices ever known in history—some experts say even down to two or three cents a pound.

It is a folly to subject ourselves to a constant menace of this kind from European complications, and there is no reason why we should continue dependent upon vessels from Europe to carry our products abroad. Europe grants subsidies amounting in the aggregate to \$26,000,000 annually.

Whether we want to do it or not, if we are going into the field of competition we must meet them upon their own ground. If I were in business and my competitor across the street had delivery wagons for the delivery of goods and I had none, I would expect him to drive me out of trade. I would have to, in a practical, common-sense business way, meet him upon his own basis. If he advertised and I did not, I would expect him to attract trade at my expense, and I would have to buy delivery wagons as well as spend money for advertising, whether I wished to or not. Business conditions would force it.

Mr. President, the South is now producing more than \$400,000,000 of exports, about one-third of the total exports of this country, and it is reasonable to suppose that at the rate of progress we have made during the past ten years our share must largely increase, more rapidly, perhaps, than in any other section of the country. It does seem to me that the time has come when the representatives of the South, those seeking to lead public sentiment, might take a broad stand in harmony with the views and interests of its business men, upon whom rests its prosperity. I for one am ready to vote for a government policy which will build up an American merchant marine.

I believe that the cotton manufacturers of the South at their Charlotte convention represented the true business inter-

ests of the South. Having studied this question for many years, as they have done, their views demand the honest thought and careful study of those who stand here claiming to represent the South. I believe that every man on such a business proposition as this should vote according to the dictates of his judgment, and his belief of what is best for his people, unbiased and unprejudiced by mere political considerations, and I shall so act and vote.

From 1880 to 1890 the South's capital in cotton manufacturing increased from \$21,000,000 to \$61,000,000, and since then it has grown to \$150,000,000. New England and old England have made enormous wealth out of Southern cotton. The mills of the world using our staple represent a capital of \$2,000,000,000 and employ hundreds of thousands of hands. For the control of this industry—a prize great enough to enrich an empire—the South is now contending, and the men who are now leading in this battle of the giants for commercial supremacy should have the support of every man who has at heart the welfare and prosperity of the South.

In connection with his speech Senator McLaurin read the letters from Southern business men of the South published in recent issues of the Manufacturers' Record.

THE SOUTH NEEDS SHIPS.

Mr. W. B. Smith Whaley Strongly for the National Subsidy Bill.

Mr. W. B. Smith Whaley of Columbia, S. C., one of the leading cotton-mill men of the South, president of three cotton mills having an aggregate capital of about \$3,000,000, telegraphed last week to Senator McLaurin and Congressman Elliott as follows: "South's best interest demands the hearty endorsement and support of the ship-subsidy bill. I cannot urge too strongly the support of this measure from the manufacturers' standpoint." In a letter to the Manufacturers' Record he says: "I think that the ship-subsidy bill is of the greatest interest to the South. It is not many years hence when the demand for the exporting of her wares will be one of the greatest features of the section. We need ships for this. With the inauguration in the future of the Nicaraguan canal the Southern ports will become the shipping ports of this country for the Orient and the Pacific trade. The United States government can well afford to foster and build up by heavy subsidies the exporting of American products in American bottoms. The stimulant this would give the export trade cannot be overestimated. The assurance that the goods exported to foreign countries would be received and assurance doubly given that they would unquestionably be continued without depending upon outside agents, however partial, are among the greatest needs of our export trade today. When American goods are delivered in foreign bottoms under a different flag it is no advertisement and no credit to the United States.

"The question is often asked whether it will be possible to continue receiving these goods if they are purchased from this country, the impression being that this country not having its own vessels, there will be no guarantee of continuance of supply. As competition must necessarily become sharper each year in meeting the Oriental trade, and with the development of the Pacific islands, the demand for American bottoms will increase to an enormous extent. In view of the partiality continually shown for American products, the inability to deliver must be removed. There is no surer way of

doing this than by Congress establishing a suitable subsidy bill, by encouraging the shipping trade in our export cities and the companies to operate these ships. It is well known that American wages are far better and far more remunerative than any other country in the world.

"The competition arising from the cheap labor continually employed on tramp ships of other nations, as well as on rovers of any nation without obligations and with plenty of time, has been discouraging to any concern in this country seeking to develop the foreign export trade. The demand for cheaper freight rates and the competition of these tramp ships and rovers reduce the marginal profit to an undesired extent. This can be and would be easily corrected by the assurance from the government of a reasonable protection to the investors in these lines that at least it would pay a sufficient amount to overcome these differences and place freight rates on a competitive basis and the investment on a reasonable interest-bearing plane. The encouragement to export the goods of this country that must be induced by co-operative arrangements in business, though centered in the development of the shipping industry under such a subsidy bill, would tend largely to increase the export trade of our country, and increasing values would be the result to our business, instead of the lethargic attempts at exporting today and the gradual glut of our home market with wares that our foreign cousins are too eager to have and willing to have at a much more remunerative price. These and other weighty questions predicated upon the magnificent development of our Southern country, which must continue to grow and expand and be appreciated for years to come, lead me to believe that the imperative duty of every Southern representative in Congress is to support any subsidy bill tending to bring about these results.

"The selfishness displayed in the antebellum and antiquated views prevailing in the surroundings of our representatives should have no place in the minds of proper thinking people today. The fact that protection is needed more in the South than in the North or any other section of the country is still not potent to this class of our people. They are still laboring under the false impression that they should have ability to purchase unrestricted from any part of the world, not realizing that their needs are insignificant as compared with the increasing values that protection offers to their home products. The same argument applies to the ship-subsidy bill. The day will come when the South, of all sections of our country, will be the stoutest protectionist and the most urgent for the subsidizing of American ships, because each year its manufactures are increasing. In all lines the quantity of its wares is becoming greater, and for a healthful, continued growth and expansion, which we are all seeking, there must be an outside market created. This cannot be better created than by the encouragement of investments in business enterprises that will relieve the country of its surplus products and land them on foreign shores. The American flag flying in foreign ports would remove obstacles against all goods as long as there is a market in foreign parts. I have stated my views on this subject as demanded by the needs of our Southern country which have come under my personal observation."

The Melbourne Argus announces that the tenders for the supply of steel rails and fishplates for government railways in Victoria made by the Illinois Steel Co. of Chicago and the Lorain Steel Co. of Cleveland have been accepted.

MILL MEN ENDORSE IT.

Views of Carolina Manufacturers on Senator McLaurin's Position.

[Special Cor. Manufacturers' Record.]
Charlotte, N. C., February 9.

Your correspondent has received from a number of cotton manufacturers in this State and in South Carolina letters, most of them strongly commending the position taken by Senator McLaurin of South Carolina on the pending shipping bill. These letters are from very prominent men, widely known as leaders in this industry. Only one letter out of those received opposes Senator McLaurin's position. The letters follow:

J. W. Cannon, secretary Cannon Manufacturing Co., Concord, N. C.: "I heartily endorse Senator McLaurin of South Carolina or any other man who is looking forward to the best interests of the United States, and my opinion is that the men abreast of the times are those who are looking forward to the broad expansion of American business interests. I heartily endorse the subsidy bill, and think it would be a great benefit to our Southern States."

S. B. Tanner, Caroleen, N. C., secretary and treasurer the Henrietta Mill: "We think the stand Senator McLaurin has taken is decidedly for the best interests of this country from a business standpoint."

John H. Montgomery, president Paolet Manufacturing Co., Paolet, S. C.: "I commend the stand Senator McLaurin has taken."

R. T. Fewell, president Arcade Cotton Mill, Rock Hill, S. C.: "I fully concur with Senator McLaurin's views on the foreign policy of the government aid to the merchant marine. Eliminate the negro from politics and you will see no more solid South, and our representatives would not then be hampered and condemned, as they sometimes are, for voting for the best interests of the country, regardless of party."

W. C. Leak, president Pee Dee Manufacturing Co., Rockingham, N. C.: "We are not in favor of the ship-subsidy bill, and consequently do not commend the position taken by Senator McLaurin of South Carolina. If the United States is able to build bridges, etc., for the purpose of competing with foreign countries in steel, iron, etc., we do not see why we should not be able to build ships to compete in other lines of trade."

R. Z. Cates, president Arkwright Mills, Spartanburg, S. C.: "In my judgment, the present greatest need of this country at large is extended outlets for its cumbersome surplus of agricultural and manufactured products, nor do I believe it possible to obtain these except through increased ocean tonnage."

Beaumont Oil Companies.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, February 8.

Messrs. O. B. Greeves and M. K. Fletcher, who own ten acres near the Lucas geyser, have contracted with Mr. H. Schlieber of New Orleans for boring on the tract. Mr. Schlieber represents New Orleans capital. Several wells will be sunk.

The Higgins Oil Co. has made a contract for the boring at its own expense of a well on one of the three tracts owned by it.

Construction of the pipe line is being pushed. The material is arriving for the 50,000-barrel tank to be erected by Messrs. Guffey & Galey. They announce that neither their well nor the pipe line has been sold to the Standard Oil Co., although stating that they would, of

course, be willing to sell them or anyone else the oil.

The Corsicana & Beaumont Oil Co. has been formed, among the incorporators of which are Judge Rufus Hardy and James Garrity of Corsicana, both oil men. The capital stock of the company is \$100,000. C. S. Pyle, an oil man from Indiana, and Judge W. B. Moses of Fairchild will manage the concern, with headquarters here.

Mr. V. Wiess has just received the plans for the five-story modern office building to be erected by him in this city. It will be equipped with elevators and all modern conveniences.

IN SOUTHWEST RICE FIELDS.

Possibilities of the Crop in Texas and Louisiana.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, February 9.

When you strike a rice man you are apt to forget even the big oil well, and it takes a good deal of determination to keep from plunging at once into rice farming. The profits from one year's crop being sufficient to pay for the entire cost of land, labor and every other expense is a tale that is frequently told, and the irrigating-canal companies are marvelous money-makers. In a case I have heard of one of these companies earned 72 per cent. in one year on a capitalization of \$189,000. Is it any wonder that the millionaires of the East and North are forming irrigating companies for operation down here, or that the farmers of the North are flocking to this section to raise rice?

Not all the surging throng one encounters in the hotel lobbies and on the street corners here was originally attracted by the oil strike, and many of those who came down to see what the oil situation might develop for them have transferred their interest to the rice proposition, and are buying or renting rice lands or gathering data on irrigation to submit to their capitalistic friends. I am told that for months the hotels and real-estate offices at Crowley and Jennings, La., have been besieged by Northern farmers and speculators anxious to identify themselves with the most alluring industry in which, around here at least, the tiller of the soil can engage.

The history and statistics of rice-growing, as engaged in by the farmers of Southwest Louisiana and Southeastern Texas, would fill a big book, and would prove almost as wonderful reading as a tale of the genii in the "Arabian Nights." For instance, there is the case of S. T. Cary, immigration agent of the Southern Pacific, who dropped off a train from Iowa at Jennings some fifteen years ago. The low, flat prairie lands which comprise the rice-growing section were used for the grazing of long-horn cattle, and were esteemed of such little value that Mr. Cary got 300 acres at ten cents an acre. And some holders had even given their acres away, for fear the tax valuation might be increased and the taxes piled up on what were considered well-nigh worthless lands.

Rice farming by irrigation was then in its infancy, the product in this country up to that time being practically confined to the inundated fields of the South Atlantic coast. Mr. Cary began the cultivation of rice on his ten-cent land, and what the industry has developed into may be perceived from the fact that today his farm is worth \$30,000, or \$100 an acre. Last year he put \$2500 into a syndicate to make a payment on 1500 acres of rice land, his interest being one-third. At the end of the harvest he received a check for \$10,000, which represented his interest in the profits in the cultivation of but 500 of the 1500 acres purchased.

From forty acres of Japan rice Robert Andrews of this (Jefferson) county harvested twenty-three barrels per acre and sold it for \$3.40 per barrel, making \$78.20 per acre.

Wm. Day, also of this county, made these sales from sixty acres of Honduras rice: 400 barrels at \$4.50, 325 barrels at \$5 and 175 barrels retained for seed, worth \$5 a barrel, making a total of 900 barrels from sixty acres, with a total value of \$4300, or \$70 an acre.

These are merely instances. I have heard many stories of the like profitable operations, and even those who rely on rainfall and do no irrigating—"Providence" rice, this product is called—sometimes make enough in one year to pay for their farm, although, of course, there are many cases of comparative failure among those who do not make sure of the necessary water supply by either canals or wells. There is a rainfall of sometimes 100 inches a year in this section, but from the time rice is a few inches high, in May, as a rule, until it ripens, in the latter part of July or during August, it must be flooded to insure a certain crop. A scarcity of rainfall then is disastrous.

Not every man will enjoy a big success, and some years are better than others; the storm which did such damage at Galveston having cut off the late crop last year, for example. But if right methods are adopted the returns are surely large, and in many cases enormous, and as rice farming only requires about four months' real hard work in the year, it is easy to understand how attractive it is to the farmer brought up under conditions which prevail at the North.

It is not my purpose to go into the technicalities of rice-growing and describe the methods by which canals are dug, pumping plants put in, the rice harvested, milled and marketed, for those are subjects which have received ample and exact treatment at the hands of men of long experience in the industry, and are easily accessible to those whose interest may lead them on to further investigation. I mean simply to lay before those who care to read this article some of the striking facts in connection with an industry which now yields a product worth some \$5,000,000 a year, which is in its infancy, which brings a sure return, and which can never be overdone, for the reason that the area in which rice is raised is fixed. There must be a certain quality of soil, with a firm subsoil; it must be in a region where there is much and reliable moisture, and where there is plenty of water for canals or wells, and where drainage to at least a certain degree may be obtained, for one of the great advantages this section has over the Atlantic coast rice fields is the comparative cheapness of production, the crop being cut by a harvester, the same as wheat is harvested. The area in which these requirements are met comprises Southwest Louisiana and Southeast Texas, along the coast and extending west to about the Colorado river. Not all the lands in this section could be turned into rice farms, but outside of the district named profitable rice culture of this character is rather limited. In the Crowley district of Louisiana lands have increased in value like town lots in a booming city, and \$30 to \$50 an acre is now a common price for lands which sold for ten and twenty-five cents fifteen years ago. Over on the Texas side, except where there has been a considerable development, lands may be had for \$10 to \$30 an acre, but the wise owners are holding on in the certain conviction that values will go on increasing until they have reached the level of the best farm lands in other sections. It is firmly be-

lieved by many shrewd observers that \$100 an acre land will not be an uncommon thing in the rice districts within a few years.

The basis on which their calculations are made are these:

The area in which rice can be cultivated is limited; with irrigation there can be no complete failure of crops; not half the rice consumed in the United States is now raised here, so the danger of a glut in the market is very remote.

Of course, it is a law of trade that such immense profits as are made by irrigating companies and rice-growers may not continue. But even should lands pass into the hands of strong holders and be greatly advanced in value; should an increase in irrigating companies and the use of individual deep wells cut down the profits of the irrigating companies, and should the production of rice reach the point where the home market is oversupplied, there are still elements in the situation which promise a perpetuity of the industry on an exceedingly profitable scale. In any event, those who get in now will almost certainly reap a rich and abundant reward.

There has recently been formed a sort of rice trust, with which the rice farmers at least do not find fault, as it has for its object the maintenance of prices and the marketing of the product. Prices have varied in former years, running down at times below \$2 per barrel (it is estimated that it costs \$1 a barrel to produce), but while much depends on the quality at any time, it is believed that good figures are now assured.

As to the consumption of rice, a statement recently made to me by S. F. B. Morse, assistant passenger traffic manager of the Southern Pacific, is apropos: "Danger of overproduction? Why, no. Why, we don't raise half enough to supply the home markets now, and the education of people to appreciate rice has just begun. The average man only knows of rice as boiled and in a pudding. I sent our Mr. Mayo over into Louisiana among the Acadians and down to New Orleans to talk with the French cooks, and don't you know he came back with over 200 recipes for cooking rice. I ran across one of these dishes in a restaurant at Houston the other day, and it tasted so good I ate till I nearly foundered."

"And talk about nutritive qualities. Why, a Chinaman doesn't take anything but some tea and rice cakes with him for a tour around the world, and two Chinamen will carry a man as heavy as I am all day long and set him down at night without complaint, and do the same thing day in and day out. Two husky fellows who live on meat and our kind of food would puff and blow if they had to carry me half a mile. I tell you the consumption of rice is bound to increase, and the industry of rice-growing is already one of the greatest things going today."

ALBERT PHENIX.

The Saturday Evening Post announces for early publication a 12-part serial story of love and adventure by Morgan Robertson. "Masters of Men" is a powerful tale of the new navy. The central figures in the story are a rich orphan, who has entered the navy as an apprentice, and a young ensign, fresh from the Naval Academy. The author leads his two heroes through a maze of adventures by land and sea.

The Southern Cotton Spinners' Association is to meet on February 16 to discuss the plan of curtailment of production.

When in Beaumont, Texas, stop at the Imperial Cordova. American and European plans. Centrally located. Large, comfortable rooms. Excellent table.

In the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., February 12.

The market the past week had a double aspect. To those who were in the market, feeding what demand was developed, it had an appearance of steadiness not apparent to observers who had no interests to be affected. When gray forge is selling at \$8.75, and \$9 to \$9.25 are given out as quotations for that grade, it don't look like either a healthy or a steady market. No. 2 foundry is quoted by all the interests at \$10.50 this week. Last week it was \$10.75. The acknowledged decline in this grade don't speak well for either a steady or a healthy market. It is evident that buyers are not yet satisfied that lowest prices have been reached.

A large business was declined by a leading interest at twenty-five cents under their asking prices, on the principle that prices were reasonable and the continued large inquiry indicated an interest in the market that must soon eventuate in good buying, and the now due buying movement, when it did materialize, would soon absorb any existing surplus. The prevailing values for iron are about as low as they can go and maintain the present wage scale. So the way the market will go is a matter of interest from more than one point of view.

The committee of miners in its examination of the January sales of the Tennessee Company found that the average price obtained was less than \$10. This proves two things, i. e., that the demand was for low grades, and that quotations were not maintained. The demand so far this month has been mainly for low grades also.

Mr. C. E. Buck has obtained the control of the Trussville furnace, and announces that within three months it will again be in operation. The same party concluded an important deal with the Alabama Consolidated Coal & Iron Co., involving 1200 acres of land carrying the soft and hard red iron ores. The former runs 54 per cent. of metallic iron, and the latter about 40 per cent. The property has opened mines on it which were being worked, the daily output being 200 tons. This will probably be largely increased. This purchase secures for the Gadsden furnace a practically illimitable supply of ore. Situated near the furnace, the delivery at furnace will be at minimum cost.

The De Bardeleben Coal & Iron Ore Mining Co. has been chartered. It is capitalized at \$250,000.

The trade in coke with Mexico and the Pacific coast continues fine, taxing the capacity of those handling it.

An important contract for shipment to Cuba has been secured by one of our leading industries. It is for six large Corliss engines. This is but the beginning of what will develop into a large and lucrative trade.

The Hardie-Tynes Company, whose shops were lately destroyed by fire, will probably rebuild at North Birmingham.

The Southern Car Works Co. is busy locating its various buildings on the site selected. The past week it had orders from Mexico for heavy iron cars, and from domestic sources one order for 500 cars, ordinary pattern and make. Interest in Ensley City continues unabated, and faith in its future is evidenced by the continued investments in real estate. Everything indicates a busy year for this locality.

J. M. K.

The Pig-Iron Market.

Matthew Addy & Co. of Cincinnati, in their weekly market report, say:

"In the holidays it was predicted that early in the new year there would be a

vigorous buying movement. This has not come with the spectacular features, the blare of trumpets, so to speak, that accompanied the flood of pig-iron orders that followed McKinley's election last November. But we are none the less having a quiet and steady purchasing that, while devoid of anything sensational, yet is highly satisfactory. The buying is really a great deal more considerable than probably either buyers or sellers appreciate, for the daily tonnage at the end of the week shows up handsomely. And the buying is so general and so well distributed that it is not an easy matter to say much about it. All grades of iron have been sold, and all classes of consumers have been represented. The most welcome orders that have been received were some round lots for gray forge, which grade until recently has been very slow.

"It seems that before long the remarkable difference between the state of the market for finished goods and the state of the market for pig-iron must disappear; in fact, the latter is already getting in a different and better condition. In finished goods the market shows a rising tendency, and it is impossible in certain lines to get anything like prompt deliveries. In certain lines of steel, for example, the mills are from sixty to ninety days behind their contract deliveries. Finished goods have been buoyant and active. Pig-iron in January was quite the contrary. February's business, if it keeps on as at present, and there is every reason to anticipate that this will be the case, will speedily change all this."

FACTORIES FOR ARKANSAS.

Efforts to Encourage Investments by Exemption from Taxation.

[Special Cor. Manufacturers' Record.]
Fort Smith, Ark., February 6.

Arkansas has so many natural resources in timber, minerals, etc., so many waterways, so much fertile soil, such favorable climate for man and for the growth of every species of vegetation common to its latitude, that if its people were required to maintain themselves from within the boundaries of the State they could do so with ease and enjoy every comfort and blessing granted to the human race by Mother Earth.

An illustration of this truth is furnished by considering, for a moment, the magnitude of one of its products. The cotton crop for the season of 1900 and 1901 will be close to 1,000,000 bales. The population of the State is about 1,200,000, which gives five-sixths of a bale, of the value of about \$40, to every man, woman and child in the State.

The mere mention of such facts makes the supposition a reasonable one that a State so blessed is not required to offer additional inducements to capital and desirable immigration to increase its material wealth and population. Yet the spirit of the times—the "hustle" of the present age—does require it, and all communities which possess a proper ambition to keep abreast of the times must do so.

If this large product of cotton, or even 50 per cent. of it, was manufactured into some kind of material, what a great source of additional wealth this would prove to be! Every bale of the raw material would be worth three times its original value, the largest per cent. of which would be expended for labor.

Unfortunately for the State, the absence of capital has so retarded manufacturing interests that 95 per cent. of this cotton is shipped to other localities, to be shipped back as manufactured material, and this want of capital retards the development of all other interests.

The people of such localities, who, more than any other, feel the absence of the necessary means for development, are willing and ready to offer any inducements necessary to bring new capital into the State. A proposition is now pending in the present session of the general assembly of the State to exempt manufacturing industries from taxation for a limited number of years. This movement has heretofore met with some opposition upon the ground of "class legislation" and "injustice to the taxpayer." Wholesome agitation, however, and the adoption of similar laws in other States have more or less weakened these objections, so that it is thought the measure will pass at the present session. It is clearly shown by its advocates that such a statute would be of the greatest benefit to the State and its people, both collectively and individually, and an injury to none.

The erection of the original plant and the necessary residences of its owners and employees brings that much new money into the State to start with. The raw material is changed into merchantable commodities, thus adding at least 300 per cent. to its original value. All of this increases the wealth of the State, and the residence property, as well as the manufactured product, becomes, in some shape, taxable wealth at once, while the original plant follows a little later when the exemption expires.

It must be admitted that factories are the greatest labor-employing agencies in the world, and hence creates a healthy increase in the population of a State.

The individual taxpayer is also benefited. Taxes are usually levied by boards, who arrive at the rate of taxation as follows: The amount of money necessary to carry on the government for a year, be it State, county or municipality, is ascertained. The assessed valuation of all taxable property is then footed up, whereupon a rate of taxes is levied upon the assessed valuation which will produce the amount of money necessary for the expenses of the government. It necessarily follows, if by reason of new production of taxable wealth the assessed valuation of property is increased, the rate of taxation is lowered and the taxpayer is correspondingly benefited by the lower rate of taxation.

As heretofore stated, it is confidently believed that the exemption measure will now become a law, and if so, that it will have the desired effect. The strongest argument against exemption is that the State is so rich in unlimited resources and magnificent products from its soil that it ought not require additional inducements to the investment of new capital, and that money and people ought to come by the millions by merely extending the invitation.

The argument is good, and, if time were no object, would prove effective; but most of us want to enjoy the realization of our hopes and aspirations while we are yet in the land of the living, and not leave it altogether to future generations.

S. A. WILLIAMS.

The Louisville & Nashville Railroad Co. has taken a contract to transport 2000 carloads of rock phosphate from Tennessee deposits to Pensacola, where it is understood considerable of the material will be exported to Cuba. The contract calls for the delivery of about 200 cars daily at the shipping port.

The Mallory Steamship Co. has let contract for an addition to its fleet to the Harlan & Hollingsworth Co. of Wilmington, Del. The vessel, when completed, will be placed in service between New York and Galveston, and will be named the Denver.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Queen Anne's Railroad.

At the annual meeting of the Queen Anne's Railroad Co. President William H. Bosley and the other general officers were re-elected. The re-election of Mr. Bosley is a merited tribute to the ability and energy which he displayed in the construction of this line and the development of its traffic. It has become one of the principal thoroughfares of business between Baltimore and the eastern portion of Maryland, as well as the State of Delaware. Arrangements have been made to resume the operation of the route between Baltimore and Cape May, and there is a possibility that an ocean steamship service may be inaugurated between Lewes, Del., and New York, also in connection with the Queen Anne's Railroad.

The company has decided to issue \$2,300,000 in bonds, a portion of which will be used to pay for the extension between Centreville, Queenstown and Love Point, Md. Of the issue, \$732,000 at 4 per cent. will be used to refund an equal amount of 5 per cent. bonds. The issue is divided into \$330,000 at 5 per cent. and \$2,000,000 at 4 per cent. for three years and 5 per cent. for the balance of the time. It is understood that arrangements have been made to place these bonds immediately.

Mobile & Ohio and Southern.

Relative to the acquisition of the Mobile & Ohio Railroad by the Southern, "railway financiers are of the opinion," says the Wall Street Journal, "that important advantages have been gained by the purchase. These advantages will be most pronounced at three points—Mobile, Birmingham and St. Louis. Mobile & Ohio has good terminal facilities at each of these points, and the line may prove to be of importance to the Southern Railway in case the iron and steel combination should include Tennessee Coal & Iron, and an effort be made to develop a large export business from the Birmingham district. Mobile & Ohio has been earning about \$300,000 a year in excess of fixed charges, and has put this money into the property. This has been enough to make steady improvement in the condition of the road, but not enough to enable the company to get the best results of operation. If Southern Railway supplies some needed equipment and maintains a fairly liberal betterment policy, it is probable that no difficulty will be experienced in paying the guaranteed dividend on the stock."

May Extend to Jackson.

The report is current that the Illinois Central has secured control of the Mobile, Jackson & Kansas City Railroad, which was recently completed between Mobile and Merrill, Miss., a distance of about fifty miles, by a New York syndicate. In connection with the report it is stated that the Central will extend it, as originally intended, between Merrill and Jackson, Miss., a distance of 110 miles. Recently a party of Illinois Central officials made an inspection of the road, and it is understood that the result of this trip was the decision to purchase it.

Expanding the System.

In connection with the report that the New Orleans & Northwestern Railroad is to be extended to Little Rock, Ark., the announcement is also made that it is to become a part of the Gould properties, and that it will be utilized with the exten-

sion to Little Rock as a shorter route between St. Louis and New Orleans. The Northwestern connects with the St. Louis, Iron Mountain & Southern Railroad at Colliston, La.

It is also stated on good authority that the Texas & Pacific Company, representing one of the Gould corporations in Texas, has purchased the Texarkana, Shreveport & Natchez Railroad, in operation between Shreveport, La., and Texarkana, Texas, a distance of seventy-two miles.

Another Arkansas Project.

According to a dispatch from Little Rock, Ark., the Gould syndicate has decided to enter the mineral deposits of North Arkansas by forming a company to build a railroad along the White River valley. It is entitled the White River Valley Railway Co., and proposes constructing a line from near Batesville, a distance of 130 miles, in a northwestern direction. The road is through the territory in which the St. Louis & North Arkansas and its connections are being completed. The incorporators of the company include George J. Gould, also Vice-Presidents Harding and Warner of the Missouri Pacific system. It is stated that surveys have already been made.

Want the Western Maryland.

The syndicate represented by Mr. Edward Lauterbach of New York has made an offer to the city of Baltimore of \$5,500,000 for its interest in the Western Maryland Railroad, and the offer is now under consideration. As already stated in the Manufacturers' Record, it is reported that the syndicate which Mr. Lauterbach represents desires to make a connection between the Western Maryland and the Baltimore & Drum Point Railroad, which is partly constructed between Baltimore and Drum Point, on Chesapeake bay. Another syndicate is also negotiating for the purchase of Baltimore interests. This one is represented by Hyland P. Stewart of Baltimore.

New Road in West Virginia.

The Tyler Railroad Co. has been organized to build through the northwestern section of West Virginia between Sistersville, on the Ohio river, and West Union, in Doddridge county, an estimated length of twenty-five miles. Mr. H. W. McCoy of Sistersville, one of the directors of the company, informs the Manufacturers' Record that the first section will be built between Sistersville and Middlebourne during the present year. It is intended to utilize electric motors. The promoters of the company are business men located in this section of the State.

A Tennessee Central Report.

A dispatch from Nashville, Tenn., states that the Tennessee Central Railroad Co. has secured control of the Nashville & Knoxville Railroad. This line is seventy-nine miles in length, extending between Lebanon and Monterey. It has been controlled by what is known as the Crawford syndicate, of which A. J. Crawford of Terre Haute, Ind., is president. By securing control of the Nashville & Knoxville the Tennessee Central avoids the construction of a considerable mileage on its route to Nashville.

Birmingham Railway Improvements.

The Birmingham Railway & Electric Co. of Birmingham, Ala., which recently effected a combination of the city and suburban lines, is making several improvements to the physical condition of its property. Vice-President Robert Jemison informs the Manufacturers' Record that about thirty miles operated by steam-

power will be rebuilt for the use of electric motors. About \$200,000 has been appropriated for improvements to the company's power plant, which are now being made.

Relaying Parts of the System.

The Kansas City, Fort Scott & Memphis Railway Co., as already stated in the Manufacturers' Record, has determined upon a number of improvements between Birmingham and Kansas City. About 110 miles of 75-pound rails will be substituted for lighter metal upon the sections between Memphis, Tenn., and Hoxie, Ark., Memphis and Tupelo, Miss., and in the Joplin (Mo.) mineral district.

Railroad Notes.

At the annual meeting of the Norfolk Railway & Light Co. Mr. R. Lancaster Williams was re-elected president.

It has been decided to alter the plans of the depot to be built at Knoxville, Tenn., by the Southern Railway Co. It is understood that the structure will cost about \$70,000. Mr. Frank P. Milburn, architect for the Southern Railway, prepared the plans.

Messrs. Scott & Stringfellow, bankers of Richmond, have recently prepared an interesting analysis showing the earnings per ton per mile and other statistics of the Norfolk & Western and the Chesapeake & Ohio railroads. Their earning capacity is compared with a number of Northern systems, and the figures show a decided advantage in favor of the lines in operation in Virginia.

Activity at Clarksville.

A correspondent of the Manufacturers' Record at Clarksville, Ga., writes that a company is to be organized in this town to operate a canning plant. There is also a possibility that Philadelphia parties will build a cotton mill of 5000 spindles if local business men will subscribe to the capital stock. A plan is being agitated to build a railroad between Clarksville and Dahlonega, while Clarksville may be located upon a new railroad between Atlanta and Knoxville in the near future. The correspondent writes that an excellent opportunity is afforded to construct an ice plant, as it would have a monopoly of the business of an extensive market.

"American Industrials, With Special Reference to the Preferred Shares of Investment," is the title of a pamphlet issued by J. S. Bache & Co. of 66 Exchange Place, New York. It contains descriptions of the organization, financial condition and other salient facts of thirty industrial securities. The object is to show that there are a number of industrial stocks which may be considered safe from the purely investment basis. Not the least important feature of the publication is the digest of New Jersey laws, where the protection afforded to preferred shareholders under the general laws of the State of New Jersey are pointed out, and the special conditions which differ therefrom in the case of individual companies.

Henry Norman, M. P., in his fourth Russian article, in the February Scribner's, describes the region of Central Asia opened up by the Trans-Caspian Railway. This is in striking contrast with the country opened up by the Siberian Railway. It traverses the romantic region of Turkestan, going through such strange cities as Merv, Bokhara and Samarkand. Mr. Norman's account of the picturesque people and their unusual industries furnishes one of the most dramatic chapters in his exposition of present conditions in a country that is little known. The illustrations are mostly from his own photographs.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Truckload of Cotton Ablaze.

A truckload of burning cotton furnished excitement at the corner of West and Barclay streets yesterday afternoon. Seventeen of a load of twenty bales went up in flames before firemen could put the blaze out. Only the three under bales at the tail of the truck were saved. The loss is set by the owners, Woodward & Stillman, 22 William street, at \$700, insured.

The driver left his employers' place for one of the piers on the North river. When close to a peanut stand on the West-street curb, near Barclay, he found a bale near his seat on fire. In a minute other bales were on fire, and he pulled his team of two horses around on the Barclay-street crossing. To save the horses they were unhitched.

The burning load attracted a crowd, and soon a volunteer bucket brigade of nearby storekeepers was engaged trying to put the fire out. They were unsuccessful, and Policeman Filan of the Church Street Station rang in an alarm.

The above item, from the New York daily papers, is another striking lesson as to the danger of fire from badly-covered square bales. This cotton had just been removed from the central stores. The fire patrol believes that the fire had been smoldering for some time, but the fact was not noticed when the truck was loaded. Such a fire would have been impossible with roundlap bales.

An \$80,000 Cotton Mill.

The Cliffside Mills has been incorporated, with capital stock of \$80,000, by Messrs. R. B. Haynes, T. B. Lovelace, Henry Jenkins, L. A. Holland, Gaither Kennedy and J. F. Whisnant of Henrietta, N. C., for the erection of a cotton factory at Lovelace Shoals, on Second Broad river. The Messrs. Haynes and Lovelace mentioned contracted last fall for extensive water-power developments at the shoals, and it was announced that they intended to locate a cotton factory. The site comprises 600 acres of land, and foundations for the dam and other structures and buildings are probably under way. Brick for the buildings will be made at the site. Messrs. Ladshaw & Ladshaw of Spartanburg, S. C., are the engineers for the development work. R. R. Haynes will probably be president.

Rowe Knitting Co.

Arrangements have now been fully completed for the erection and equipment of the large textile-manufacturing plant recently announced as to be located at Huntsville, Ala., by the Messrs. Rowe, experienced knitters of New York. The Rowe Knitting Co. has been organized for the purpose, with capital stock of \$30,000, and plans and specifications are now ready for a mill to make yarns and knit same into underwear. The directors are Messrs. W. H. Rowe, Jr., and H. T. Day of New York, and Mrs. Francis J. W. Rowe, also of New York. Contracts will be awarded at once. C. R. Makepeace & Co. of Providence, R. I., have prepared the plans and specifications.

The Cotton Movement.

In his report for February 8 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that during the 161 days of the present season the amount of cotton brought into sight was 7,804,213 bales, an increase over the same period last year of 669,664 bales;

exports were 4,085,813 bales, an increase of 562,362; takings by Northern spinners 1,428,989 bales, a decrease of 339,650; by Southern spinners 794,443 bales, a decrease of 18,149.

Textile Notes.

John N. Murrell of Minden, La., proposes the organization of a cotton-mill company.

A cotton-mill movement is under way at Monroe, La., Messrs. C. L. Goodenough and R. O. Alexander being interested.

The Rotherwood (Tenn.) Woolen Mill, C. N. Jordan, proprietor, will install new machinery and make improvements for the manufacture of jeans, yarns, blankets, etc.

The Corinth (Miss.) Woolen Mills has been organized, with capital of \$52,500, and S. H. Curlee, president; J. R. Curlee, vice-president; J. C. Stanley, secretary, and S. L. Nelson, treasurer.

W. P. Bellinger of Waukegan, Fla., is organizing a company to establish knitting mill. The required capital has been obtained, site selected, and work of construction will commence soon.

G. T. Andrews and others have incorporated the Lockland Mills of Scotland Neck, N. C., for the manufacture of hosiery and underwear. Capital stock is \$10,000, paid up, with privilege of increase to \$50,000.

Mayor Eubanks of Piedmont, Ala., has under consideration a proposition for the establishment of a knitting mill. An investment of \$25,000 is proposed, if Piedmont parties will subscribe one-fifth of the amount.

The Tipton Cotton Mill Co. of Covington, Tenn., which recently completed its mill and commenced operations, intends to increase its spindles. New spindles numbering 2500 will be added; present equipment is 3500.

The Maxton (N. C.) Cotton Mills was sold at public outcry this week for \$6000.50. H. C. McNair, secretary of the company, bid it in. The stockholders will endeavor to have the bid raised before sale is confirmed.

The Cumberland Knitting Mills of Knoxville, Tenn., has been organized for the establishment of a knitting plant. About nineteen machines will be put in operation at the start to manufacture women's and children's underwear. The machinery has been ordered. J. Wiley Brownlee is president; Richard Boyd, secretary-treasurer, and T. J. Whittaker, vice-president-superintendent. A. J. Wilson and W. M. Brownlee will also be interested.

The following are official quotations on cottonseed and cottonseed products, as posted at the New Orleans Cotton Exchange on the 9th inst.: Prime refined oil, in barrels, 29½ cents per gallon; off refined oil, in barrels, 29 cents per gallon; prime crude oil, off loose, 24½ cents per gallon; off do., 23½ cents per gallon; prime cottonseed cake, \$23 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$23 per ton of 2240 pounds; off do., nominal; soap stock, 1.1 cents per pound; linters, per pound, choice, 4½ cents; A, 4¼ cents; B, 3¾ cents; C, 3½ cents; cottonseed in sacks delivered in New Orleans, \$14 per ton of 2000 pounds; in bulk, delivered in New Orleans, \$13 per ton of 2000 pounds.

The Bowie County Cotton Oil Co. of New Boston, Texas, has been chartered, with a capital stock of \$50,000. The incorporators are J. B. Lassiter, D. W. Chenanth of Clarksville, L. C. Stiles of English, T. A. Fuller and Lewis Tapp of New Boston.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record, Baltimore, Md., February 13.

The lumber situation locally is in fair shape, while the volume of trade during the past week has shown somewhat more expansion. Stocks of lumber are generally ample for all present requirements, and for the prospective spring demand manufacturers and dealers hold the situation well in hand. Receipts of North Carolina pine are moderate, and at all milling points there is but slight accumulation in stocks of lumber. The local demand during the past week has been light, but a number of inquiries from out-of-town dealers are on file which later on will develop considerable actual business. There is some foreign demand, but as a rule trade in this direction is moderate. Values throughout the list of North Carolina pine grades continue steady to firm. White pine is steady, with no urgent demand from the usual sources, while prices are generally firm and unchanged. The transactions in hardwoods show no marked increase in volume, although there is a better feeling in the market, and the various commercial woods are in good shape. As to value, poplar is decidedly firm, with a good demand, and stocks at mills and on yards scarce. Oak shows marked improvement, and is gradually appreciating in value as the season progresses. Ash is scarce and firm, with considerable demand from woodworking concerns. The foreign business in hardwoods shows but little improvement, advices from European ports showing a quiet market, with good supplies on hand and only a moderate demand from dealers.

Charleston.

[From our own Correspondent.] Charleston, S. C., February 11.

The week under review has been a fairly active one in lumber circles, and the outlook for an increase in the volume of business in 1901 is very fair. There is at the moment some good orders on the market for desirable lots of lumber, and Northern buyers are disposed to purchase liberally of desirable lots, for the manufacture of which this section is noted. Prices for both yellow pine and cypress lumber are firm. At Georgetown nearly everything in lumber circles is moving freely. The Atlantic Coast Lumber Co. is now shipping its entire output by the steamers Wacamac and Georgetown to New York, Boston, Philadelphia and other Northern ports. During the past week shipments of lumber from Charleston were as follows: For Boston, steamship Seminole, 53,100 feet; schooner Harold B. Cousins, 295,000 feet; schooner George H. Ames, 325,000 feet; for New York, schooner Charles F. Tuttle, 550,000 feet; schooner Lina C. Kaminski, 320,000 feet, and schooner Georgetta Lawrence, 255,000 feet. The schooner Nettie Shipman was chartered last week to load lumber at Charleston for New York at \$5, and schooner W. L. Newton, Charleston to New York with lumber at \$5.50 out of water.

Savannah.

[From our own Correspondent.] Savannah, Ga., February 11.

This section of the State has had so far this year a fair share of a good lumber trade, and the port's showing as a shipping point for lumber and timber grows in interest as the seasons pass. The report of shipments for last year to foreign

ports was very favorable. The foreign exports of lumber, of course, were light compared with coastwise shipments, but for 1900 they show an increase of nearly 150 per cent., being 9,730,000 feet, against 3,999,707 feet the previous year. The demand from foreign markets so far this year indicate a still further increase, and almost every foreign steamer taking out more or less timber and lumber. The demand during the past week has been rather better from South America. The British bark Veronica cleared for Buenos Ayres with 700,000 feet of yellow-pine lumber, and this shipment will be followed at an early date by others to South American ports. There is just now an excellent domestic inquiry, and mills at outlying points in Southern Georgia have plenty of orders on file to keep them fully occupied during the spring months. Last week about 3,000,000 feet of lumber were shipped to Northern ports, distributed as follows: Philadelphia, 2,211,390 feet; Baltimore, 403,246 feet; New York, 204,023 feet, and Wilmington, Del., 116,069 feet. The tone of the market for all desirable grades continues steady to firm, and manufacturers and dealers are decidedly firm in their views as to prices. The freight market is easier, and with a better offering of vessels a more active movement in all lines of the lumber trade will likely be developed during the spring and summer. Rates at which charters were made last week are as follows: Brunswick to New York with lumber at \$4.75; Savannah to Santos, South America, at or about \$16, and lumber to New York at \$4.50.

Mobile.

[From our own Correspondent.]

Mobile, Ala., February 11.

An active trade in all wood products is now the rule in this section, and the demand for lumber shows each month a marked increase over the previous one. At a meeting of the Gulf Coast Lumbermen's Association, held in this city last week, it was reported that the lumber business of the Gulf coast was in good condition, inquiries becoming more numerous and prices stiffening in consequence. The timber trade is absorbing millions of feet, thus relieving the export market. The stock of sawn timber is light, and the outward movement is reducing it in a marked degree still further. The Cuban trade is becoming of greater volume, and if the mills at this point should get the order for 75,000,000 feet for a certain railroad recently reported the shipments to that island would be materially increased. There is a good demand from South America at present, and shipments of lumber to Buenos Ayres and other points are increasing. Among the shipments last week were the following: Steamer King David for Recamp, France, with 1,886,000 feet of lumber; to South American ports 2,000,000 feet, to Cuban ports 200,000 feet; bark Parmetta for Cape Town, South Africa, with 641,694 feet; to Progresso, Mexico, 200,000 feet, and to Dalfzill, Holland, 48,118 feet of lumber, 2871 cubic feet of hewn timber and 123,944 cubic feet of sawn timber. Freights on timber and lumber are easier, the following quotations current at this date: Lumber to the West Indies, American gold, \$6 to \$7.50; Mexico, \$6 to \$8; Rio de Janeiro, \$15; River Plate, \$14 to \$15; coastwise, \$6 to \$7.50; Cuba, \$5.25 to \$7. Timber and lumber, steam, to the Continent and United Kingdom, per standard, £5 5s. to £5 15s.; sail, hewn, per load, 38s. to 41s.; sawn, £5 10s. to £6. Messrs. Fred O. Howe & Co. of Pensacola, in their circular for January, quote the market as follows: "Pitch-pine freights continue very dull.

We quote £5 15s. United Kingdom or Continent, £5 5s. Mediterranean and \$14 to \$14.50 River Plate and Rio. A further decline has taken place in steam freights, and boats are now fixable from £5 5s. to £5 10s., Pixpinus, according to port. Pensacola's exports for January amounted to \$1,538,437. There entered during the month forty-two vessels, net tonnage 49,869, and cleared thirty-eight vessels, net tonnage 42,867."

Memphis.

[From our own Correspondent.]

Memphis, Tenn., February 11.

The lumbermen in this district have enjoyed an unusually good month during January, and the outlook for trade is considered very promising. January recorded the best month's business in the history of the trade. Since the presidential election in November last the market in hardwoods especially has continued to improve, and the demand is now more decided, mills getting larger orders and more offers than for some time past. The various hardwoods on the market are generally steady to firm, plain red oak being the strongest on the list, \$30 per thousand feet having been recorded for recent sales. In ash the market is steady, with the exception of one-and-one-quarter and one-and-one-half-inch stock, which is scarce and higher. There is a fair supply of three and four-inch stock of the thicker grades of ash, while stocks at the mills are not excessive. At all milling sections in the Memphis district the various plants are generally running on full time, with a good supply of logs. The local demand for lumber for building purposes is quite pronounced, and both the city and suburban trade are quite active.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, February 8.

Never has there been such a January in the history of the lumber business of Eastern Texas, and the conditions which prevailed during that month are extending over into February without any sign of abatement. The dealers throughout the entire State, in the Territories and in Kansas and Nebraska are ordering very vigorously. The prices of lumber are naturally advancing in the face of such a demand and consequent decrease of stocks. There is not over 150,000,000 feet on hand at the long-leaf mills at the present time, and this is in such bad assortment that it is difficult to ship regular orders therefrom. Dimension (2x4, 2x6 and 2x8) is selling today in Texas at \$15 for delivery on a 20-cent rate. This is the highest level that was attained during 1898, the phenomenal year in the lumber business. The only difference is that the price in 1898 was reached during the height of the season, while this year it has been reached right at the beginning of the dull period of the year. There is a good demand for timber, and also ties and other railroad material, but there have been few deals of note, because most of the mills are loaded up. The only deal of note is an order for 7,000,000 railroad cross-ties, to be furnished in hewed pine by the Southwestern Tie & Timber Co. of this place to the Atchison, Topeka & Santa Fe Railway, delivery to be made in five years.

Lumber Notes.

The clearances of lumber and timber from the port of Mobile last week aggregated 6,800,000 superficial feet.

The steamship Comanche of the Clyde Line cleared from Jacksonville, Fla., last week with 320,000 feet of lumber and an assorted cargo.

Receipts of lumber at New Orleans last week were 3,100,000 feet, and for the sea-

son 64,078,900 feet, against 51,661,037 feet last season.

The shipments of lumber from the port of Charleston last week aggregated 2,100,000 feet, and for the season 25,482,591 feet, against 22,060,771 feet last season.

The extensive lumber plant of W. B. Earthman & Co. of Nashville, Tenn., was destroyed by fire last week. The loss is estimated to be in the neighborhood of \$90,000. The plant was valued at \$125,000, with insurance about \$100,000.

The Courtland Lumber Co. of South Norfolk, Va., which has been operated there for the past eight or ten years, has closed down for an indefinite period. It is reported that a portion of the plant will be removed to Georgetown, S. C.

The Valdosta Lumber Co. of Valdosta, Ga., has been incorporated, with a capital stock of \$50,000. The incorporators are J. A. Dasher, Jr., E. W. Lane, J. M. Digs, Robert Dasher and others. The new company will conduct a large commission business.

It is stated that the James Strong Lumber Co., which owns 25,000 acres of timber land in Carter county, Tennessee, will put an immense lumber plant in operation in South Bristol, Tenn., in the early summer. The minimum capacity will be 75,000 feet per day.

It is stated that the consolidation of the largest furniture companies in Grand Rapids, Mich., is now practically assured. The combine will include fourteen of the leading case-goods plants, representing assets of \$5,000,000, with a total output of \$6,000,000 annually.

The Wachita Valley Lumber Co. of Fort Worth, Texas, has been incorporated, with a capital stock of \$20,000. The incorporators are T. R. Grigsby, R. F. Brown, Henry Frey, T. H. Brents, all of Chickasaw, Indian Territory; J. G. Brown and W. A. Burton of Fort Worth.

The Camp Manufacturing Co. of Franklin has purchased from A. C. and Mills E. Howell the standing pine and poplar timber on 1100 acres of land in Nansemond county, Virginia. The Camp Manufacturing Co. has five years in which to remove the timber, with the privilege of a five years' extension.

It is stated that Hon. T. B. Young of Irwin county, Ga., has sold to the Dooly Lumber Co. 10,000 acres of timber lands. The land is situated along the line of the Waycross Air Line Railroad. The cash consideration is said to be \$30,000, or \$3 per acre. The purchaser will locate a mammoth saw-mill in the midst of the timber.

The W. V. Davidson Lumber Co. and C. H. and C. B. Benedict of Nashville, Tenn., have consolidated their lumber interests, and the plants of both concerns will hereafter be under the joint management of the members of both firms. The firm will hereafter be known as the Davidson-Benedict Company. The capital involved in the transaction is between \$300,000 and \$400,000, consisting mainly of the assets of the two firms.

Dr. R. G. Hawkins of St. Landry's parish, Louisiana, has just closed a contract with Commissioner Lee of the State agricultural department of Louisiana for the preparation of the State's display at the Pan-American Exposition at Buffalo. The exhibit will be divided into two classes—first, the natural or raw material, and second, the finished and highly-polished woods, supplemented with samples of manufactured articles in these woods.

The Wadley Lumber Co., composed of George Dale Wadley, John E. Wadley and J. M. Ashley, has located a saw-mill at Ambrose, Ga., a station fifty-three miles from Waycross, on the Waycross

Air Line Railroad. This new mill will be completed in about ninety days. The Wadley Lumber Co. owns about 25,000 acres of magnificent timber in this section. Mr. W. Y. Jessup is superintendent of the company, and George W. Guess is secretary and treasurer.

It is stated that a deal is about to be closed involving 5300 acres of timber land in the vicinity of Pikeville, the county-seat of Bledsoe county, Tennessee. The parties purchasing the property are from Richmond, Ind., one a prominent lumberman and the other a practical farmer. They propose to clear the land, converting the timber into merchantable lumber, and then commence farming on an extensive scale. The tract is located near the branch of the Nashville, Chattanooga & St. Louis Railway to Pikeville.

At an adjourned meeting of the stockholders of the Atlantic Coast Lumber Co., held at Norfolk, Va., on 5th inst., the following directors were elected for the ensuing year: F. S. Farr, Minneapolis, Minn.; Alden S. Swan, New York; L. R. Freeman, Warren, Pa.; Lewis A. Hall, Bay Mills, Mich.; W. B. Flint, New York; E. B. Freeman, Norfolk, Va., and W. A. Taft, Boston. This company owns extensive holdings of timbered lands, and recently erected immense mills at Georgetown, S. C., which are being operated.

The regular monthly meeting of the Gulf Coast Lumbermen's Association was held in Mobile, Ala., on the 6th inst. In the absence of Capt. Black, Mr. J. E. North acted as chairman, with Mr. W. J. Kilduff, secretary. The lumber business of the Gulf coast was reported in good condition, while inquiries are becoming more numerous and prices hardening in consequence. The interior trade is absorbing millions of feet, thus relieving the export market. The stock of sawn timber was reported light, and the large outward movement reducing the stock in a marked degree.

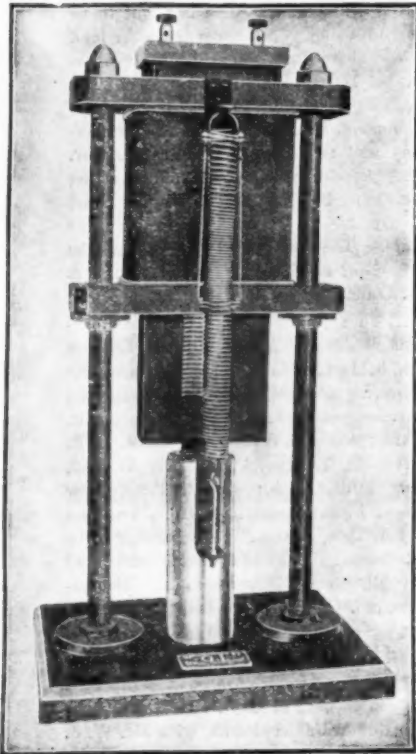
Valuable sites for saw-mills in Louisiana are at the moment in great demand, and the lumber industry of that State is in a thriving condition. Of valuable saw-mill sites Mr. Leopold Elgutter of Newellton, La., writes to the Tensas Gazette as follows: "There is a large and increasing demand for lumber in the town of Newellton, and on the many large plantations on Lake St. Joseph. While Spitzer & Co. were engaged in sawing lumber in Judge H. R. Steele's brake back of Locust Land, I had a lumber-yard in Newellton supplied from Spitzer's saw-mill, and I disposed of the lumber as rapidly as I could have it hauled, to the great accommodation of the planters. Since Spitzer & Co. quit business everybody is compelled to buy lumber in Vicksburg and Natchez at high prices, and paying heavy freight rates. There is no saw-mill nearer than the one on Somerset plantation. In the rear and front of all the plantations on Newell's Ridge and on Tanglewood and Wild Cat plantations there are large and valuable cypress brakes, in which saw-mills could be established and the lumber delivered on Lake St. Joseph. If some enterprising man will set up a mill I will engage to supply him with all the funds necessary to carry on the business, and will buy the output."

The bill introduced into the Texas legislature to aid Galveston to protect itself against possible disaster provides that money raised by certain forms of taxation for fifteen years shall be given to the city of Galveston to help it in paying the interest and the sinking fund for bonds that may be issued by the city for the purpose of raising and filling the avenues, streets, alleys and lots beyond the reach of calamitous overflows.

MECHANICAL.

New Enclosed Arc Lamp.

Betterments in electric service, both light and power, follow continually. Man-



G. I. ARC SYSTEM REGULATOR.

ufacturers of electrical supplies and equipments are constantly engaged in designing and introducing improvements in their



G. I. TYPE ENCLOSED ARC LAMP.

branch of industry. In this connection it is desired to call attention to the new enclosed arc lamp and the new regulator,

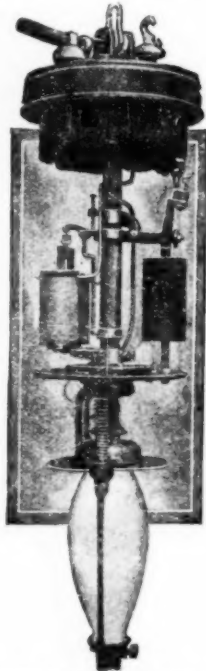


G. I. TYPE ENCLOSED ARC LAMP.

of which illustrations are given herewith. G. I. type L7 Enclosed Arc Lamp is designed to operate on constant current alternating circuits, the only limitation to

the number that can be connected in a series being that each lamp must not have less than eighty volts at the circuit terminals. The lamp operates on the shunt principle, and is provided with an automatic cut-out and a substantial hand-switch, the working parts of which are placed under the top casting, which protects them from the weather and other injury.

The G. I. alternating series enclosed



G. I. TYPE ENCLOSED ARC LAMP.

arc system A. C. regulator is designed to keep the current constant on A. C. circuit of arc lamps or arc and incandescent lamps connected in series. The source of supply may be either primary or secondary.

Full details regarding these products may be obtained from the special leaflets of the maker, the General Incandescent Arc Light Co., 572 First avenue, New York.

New Dumping Bucket.

The new automatic dumping bucket illustrated herewith was designed to meet the needs of automatic dumping on top of a pile of coal, ore, gravel or other substance, or on a level plane, which it accomplishes successfully.



NEW AUTOMATIC DUMPING BUCKET.

The usual dumping bucket requires a bulkhead or buffer-block to automatically trip the back-latch, thus releasing the bucket, permitting it to dump, as, if the side-latch is used, it must be tripped by

hand; thus additional expense of a man for this purpose. In this new bucket the bail is slotted in such a manner as to permit it to move downward after the bucket

it can be dumped by hand if desired.

The bucket is substantially made, and its merits commend it to engineers and excavators. It is manufactured by the

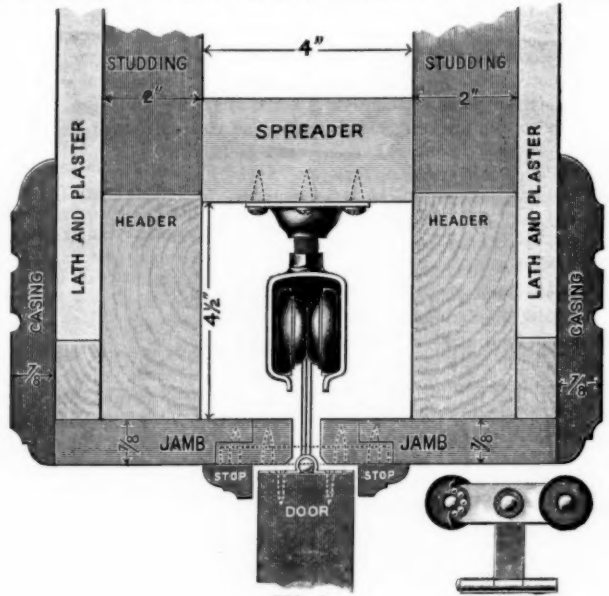


FIG. 1.

is in a state of rest on top of pile of coal, ore or gravel. This permits the latch on side to become disengaged and bucket immediately dumps, and as it is hoisted into air it rights itself and is locked automatically and returned to hatch of a vessel or

Cornell Machine Co. of Pratt, Sangamon and West Superior streets, Chicago.

New Ball-Bearing Door Hanger.

Builders, carpenters and dealers will be interested in the accompanying illustration.



FIG. 2.

for refilling by shovelers. When bucket is being filled there is a small latch in rear of bail, which is thrown over in such a manner as to guide the bail. When being lifted up with its load, after the lock

tions of the new McCabe No. 2 Special Hanger now being introduced. The manufacturer has carefully designed this equipment and built special automatic machinery for producing it at a minimum cost. The hanger is simple, durable and low-priced. Its carriage has ball bearings, constructed with great care to minimize the friction. All parts are case-hardened, with fiber wheels, making it practically noiseless, and a door on this hanger can



FIG. 3.



FIG. 4.

be moved with the slightest touch. The track is made of cold-drawn No. 13 gauge steel, with parallel slot having flanges on both sides. The inside surfaces of the track in which the ball bearings travel are as smooth as it is possible to make them. An adjustment on the track permits readjustment of the doors at any time. Figs. 1 and 2 show the new door hanger; Fig. 3, new accordion carriage for No. 2 track, and Fig. 4, section of track, with bracket and plate, as used for

The construction of bucket is such that

accordion or folding doors. The McCabe Hanger Manufacturing Co., 531 West Twenty-second street, New York, manufactures this hanger, as well as the well-known line of McCabe hangers for parlor, barn, fire, elevator, mill, car and accordion doors. Its No. 2 hangers have been used on the Gould, Astor, Vanderbilt, Carnegie and Rockefeller houses, as well as many of the finest residences in England, Germany and France. Large quantities of the hangers are now being exported to those countries, also to Australia and South Africa.

Applications of Hardwood Lagging.

The business of dealing in second-hand machinery and equipment has extended



FIG. 1.

until anything from a small monkey-wrench to a locomotive can be purchased. The steam engine is the principal second-hand product possessing the greater element of value. It frequently occurs that a user of steam-power wants an engine promptly, and second-hand engines are continually offered in good working condition, many of them being equal to new. The fact that immediate delivery can be secured is an important factor in selling these engines.

Every engine has a driving pulley or balance wheel of some sort, and it is often necessary to change this to suit the needs of the buyer.

The principal use of hardwood lagging lies in its application to balance wheels. In many cases these balance wheels, having narrow faces, are not suitable for power-transmission purposes. By applying special hardwood laggings the wheel may be either grooved for a rope drive, or it may be turned for a belt transmission, as may be desired. This application obviates the necessity of purchasing a new driving wheel, and is the more attractive, as the cost is comparatively small and the work done without undue stoppage or disturbance to the other equipment.

A main line shaft belt transmission may be converted into a rope drive, and the maximum of power secured, resulting from the saving of frictional losses in the bearings.

Or a rope drive may also be turned into a belt transmission, if for any reason such a change is wanted.

As the lagging can be made of any width, a wider belt can be used on a fly-wheel having the lagging, or two or more belts side by side employed on the same rim; in fact, the applications of laggings are endless.

The Dodge Manufacturing Co. of Mishawaka, Ind., offers its hardwood laggings, as the result of many years' experience, perfected through the use of numerous patented appliances, as well as patents upon the construction as an entirety. The company says this is an exclusive specialty original with it. A regular erecting

crew is maintained, with full mechanical equipment. This work and alterations in main drives are made with but little loss of time and at small expense compared with the cost of new flywheels.

As the lagging increases the effective diameter of the flywheel, the linear velocity is increased by the greater diameter, the speed of rotation remaining the same.

halves) ready for shipment; internal diameter of rim, fourteen feet for 15-foot pitch diameter of ropes; to be grooved for eighteen one-and-one-half-inch ropes.

Fig. 2 is of considerable interest. It shows the lagging applied to a balance wheel; internal diameter of rim, eighteen feet for 19-foot pitch diameter of ropes; grooved for eighteen one-and-one-half-

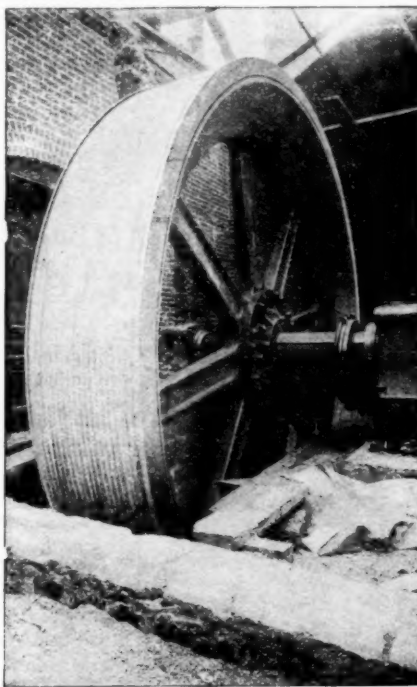


FIG. 2.

The familiar fact of greater coefficient of friction or driving power of the wood surface over iron is applicable in this case,

inch ropes, for 750 horse-power rope drive. In this instance a second-hand engine was secured having an 18-foot diameter bal-

about 50 per cent. in the cost of exchanging this balance wheel for a new driving wheel suitable for the purpose.

New Band Rip Saw.

This machine has just been placed on the market by the J. A. Fay & Egan Co. of No. 270 to 290 W. Front street, Cincinnati, Ohio.

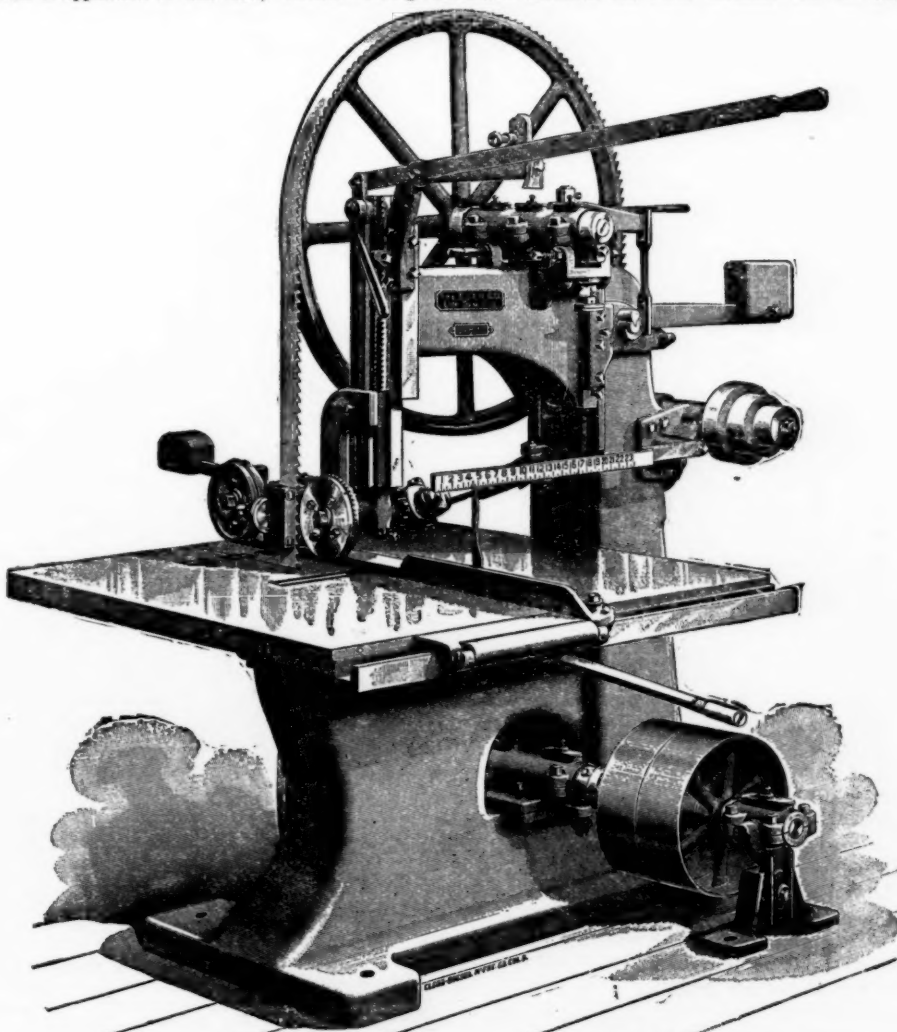
It will rip from one to ten inches thick with equal facility without changing blades, and its adjustments are made very rapidly. It will accomplish, it is stated, as much work as several circular rip saws, besides being much safer to operate, there being no danger of the lumber being thrown back and striking the operator.

Owing to the thinness of the saw-blade, the slight kerf removed is a point which will be readily appreciated by users of fine lumber. The column is very heavy, cored and perfectly free from vibration. The table is of ample size, always level, and has a plainly-stamped index always in view, and not liable to be obscured by sawdust.

The knife-edge balance, patented, is used in connection with the straining device, insuring at all times and under all conditions a perfect tension on the saw-blade, which is an important feature on a band saw, as it prolongs the life of the blade and avoids the expense, delay and inconvenience necessitated in substituting a new one.

The feed, also patented, is very powerful, and the feeding-in and feeding-out rolls are placed close together, so that short stock can be worked to the very best advantage.

For establishments where flooring and narrow stuff is made in large quantities, this machine can be fitted with "live



J. A. FAY & EGAN CO. SELF-FEED BAND RIP SAW.

and is worthy of serious consideration. The accompanying pictures show uses of hardwood lagging. Fig. 1 is a rim (in

ance wheel, with 15-inch face, weighing 50,000 pounds. By putting the hardwood lagging on the rim there was a saving of

rolls," which will return the material to the operator for another cut, making it a most valuable labor-saving tool.

The manufacturer will furnish prices and full particulars on application. The machine is illustrated herewith.

An Improved Machine Tool.

The value of a machine depends upon its availability as a work producer in a given

sene oil or lamp oil, and is therefore perfectly safe. It can be used wherever kerosene oil can be had, and there is no objection to its installation by insurance companies.

We illustrate this engine. It has run circular saws, band saw, wood-turn-

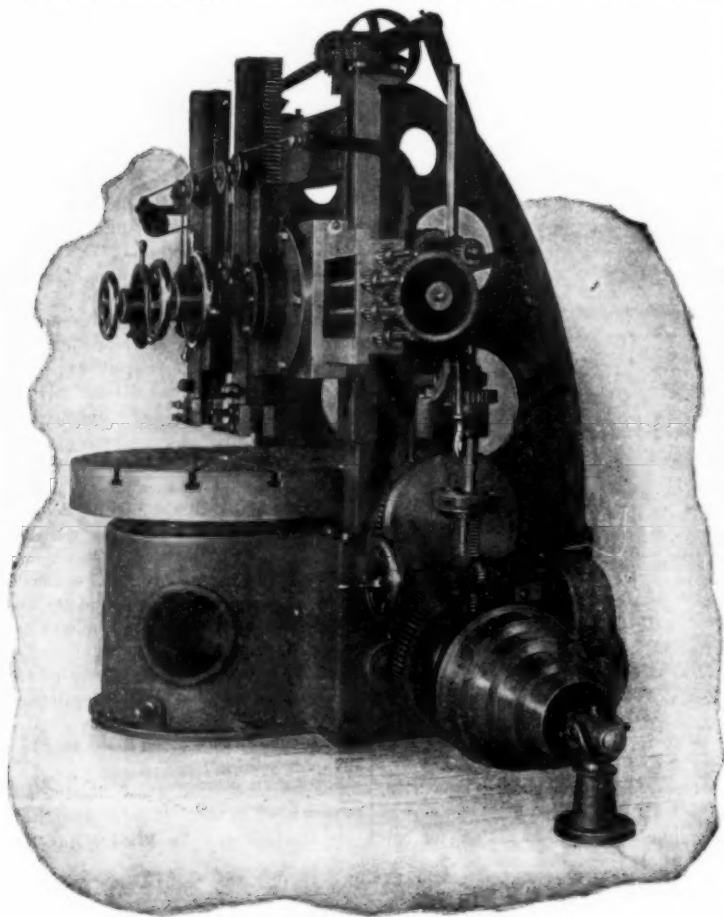
sent to prospective buyers on application by the engine's builder, August Mietz, 128 Mott street, New York.

Spiral-Riveted Pipe.

This pipe needs no lengthy introduction to buyers. It is conceded that pipe spirally-riveted is stronger and less liable to injury in shipment and by rough usage than the same grade of material would be if straight-riveted. There is even a greater difference in bursting pressure. The seams actually strengthen instead of

depressed as it leaves the adjoining edges. The natural supposition would be that this was offset or formed before being riveted together. On the contrary, it is formed by the tightness with which the overlapping edges press together. The rivets are headed down, not by blows, but solely by pressure. It is impossible to obtain such a close joint in hand-riveted pipe. The utmost care is used to have every piece and joint perfect before it leaves the works.

This company considers asphaltting very



AN IMPROVED MACHINE TOOL.

time. This does not necessarily mean that the best machine is the most expensive, either in first cost or maintenance, but that the machine which can be used for the greatest variety of work correctly, rapidly and economically is the one which should be purchased by the modern manufacturer.

Another important item is the question of floor space required for the tool.

Usually the buyer of a new machine has a well-defined idea of the kind of work he expects to put on it, and it is worth considering as to whether a vertical or a horizontal machine will be best adapted.

The machine illustrated will be recognized by mechanics as one which is rapidly replacing the old lathe; not that it will supersede the lathe in its legitimate field, but for a vast amount of work it is better adapted. This machine has a capacity of thirty-seven inches diameter, and is suitable for turning and facing piston rings, cylinder heads and a large variety of work which the shop man will readily appreciate.

The builders of this tool make several sizes, all of excellent design and powerful construction.

A very admirable modification of the machine is that it can be furnished with one turret head and one regular head, making a combination which will cover all possible conditions of work.

The builders are the Baush Machine Tool Co. of Springfield, Mass., who also build a complete line of multiple drills, both vertical and horizontal, as well as radial drills for every class of work.

Mietz & Weiss Kerosene Engine.

This new liquid fuel engine is becoming a very popular motive power where gas is not available. It uses the common kero-

ing lathe, planer, four-bit drilling machine, grindstone and small dynamo for electric light for the shop and house. The amount of kerosene oil consumed in these engines is about three-fourths pint per actual horse-power per hour, and is regulated by a governor, according to the

weaken the material, so that when tested to bursting pressure the rupture invariably occurs in the body of the pipe between seams.

Again, steel, like wood, has a grain, and, like wood, the grain is strongest lengthwise of the material. Pipe spirally-riveted gets the benefit of this by the method of construction. In durability and resistance to rust and oxidation there is no essential difference between spirally-riveted and hand-riveted pipe. The latter has been in use under ground in many localities, especially in the West, for twenty-five or

important, and gives it especial attention, using only a coating manufactured from asphalt and mineral rubber. It is refined to 99.9 per cent. pure; is unaffected by acids, earth salts, water, electrolysis, earth currents, frost or heat, or any conditions to which it is likely to be subjected; is ductile at a greater range of temperature than any other material known to science, hence will not crack or peel off or run in the hottest sun; is a perfect insulator. Being impervious to water, acids, etc., without brittleness, it is the perfect protector of metals against

CROSS-SECTION OF SPIRAL-RIVETED PIPE, No. 16 B. W. GAUGE. EXACT SIZE.

thirty years, and is doing as effective work and is apparently in as good order as when first laid.

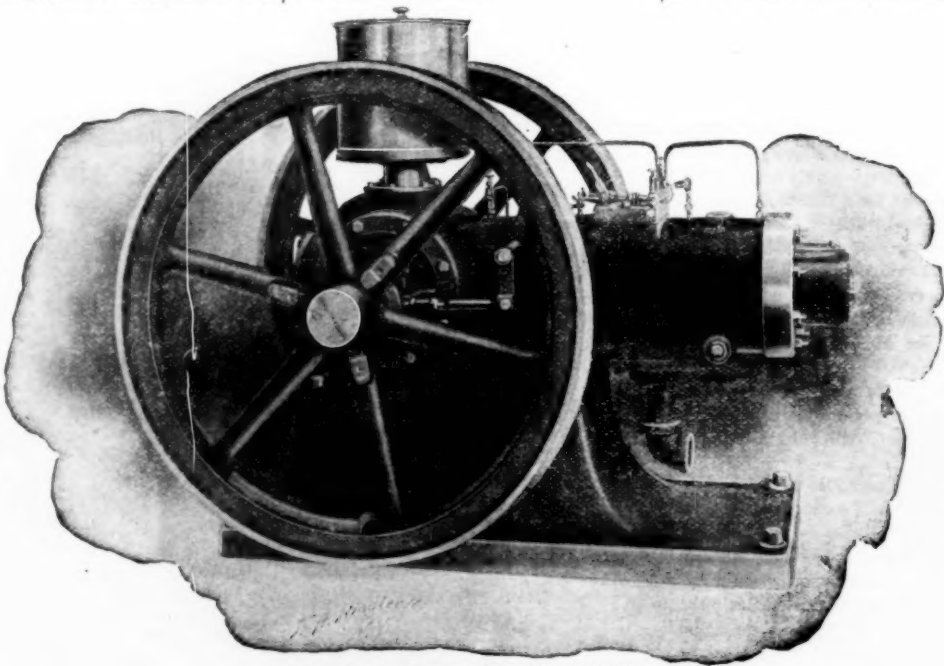
During recent years there has been marked improvement in material and methods of coating pipe with asphaltum. Considering superiority of steel over cast iron in compactness of material, resistance to rust, oxidation and decay, as well as adaptability to successful coating with asphaltum, spiral-riveted pipe of the ordinary gauge ought to satisfy the most exacting as to durability.

rust, etc. The three essentials in pipe—strength, tightness and durability—are a part of this American piping.

Further data concerning this spiral-riveted pipe will be supplied by its manufacturer.

Mechanical Ventilation and Heating.

Mechanical ventilation and heating by a forced circulation of warm air was thoroughly recited in the lecture of Walter B. Snow. He said that in the combined process a specific amount of heat is re-



MIETZ & WEISS KEROSENE ENGINE.

power used. This is claimed to be the cheapest power known today. These engines have automatic ignition, do not use the electric or tube igniters, and are, therefore, not subject to the troubles that may arise from electric batteries.

Blueprints and further details will be

The American Spiral Pipe Works, 64 Wabash avenue, Chicago, by their improved method of manufacture produce pipe of such quality and tightness that a cross-section through a lap joint or rivet appears as a single piece (see illustration). It will be noticed that the steel is partly

quired to compensate for transmission losses to the colder outdoor atmosphere, and a certain other quantity to provide for the warming of air which, intentionally or otherwise, enters the room from without.

The former amount varies with the

character of the construction and the difference between indoor and outdoor temperatures. It is independent of the volume of air supplied for ventilation. The amount of heat required for tempering the air supply for ventilation alone is directly proportional to its volume, and is that necessary to raise it to the temperature of the room. This is in no way available for heating, but it is all-important in securing satisfactory ventilation, which, when properly provided, grows effective in proportion to the expenditure.

When a fan is employed for ventilation the action is positive, and air in any required volume can be handled without reference to atmospheric conditions. Its use is imperative in buildings where per-capita space is small and the maximum air supply is to be provided. The term "fan," as here used, comprehends only that class of air-moving machines in which air enters the inlet in a direction parallel to the fan axis, and is discharged at the circumference in a direction at right angles to the axis. The disc or propeller type of wheel, of which there are several varieties, has its place as a ventilating machine, but should be employed only where resistances are not great. It serves best for exhausting purposes, particularly where used in connection with a heating and ventilating system in which the warm air is forced in by a fan of the centrifugal type.

A fan wheel of the latter type is almost always enclosed in a steel-plate housing, with proper inlet and outlet openings. The character of the material makes possible the ready construction of any special form to meet specific conditions.

Air may readily serve as a vehicle for heat for maintaining the desired temperature within an apartment. Evidently the air must be pre-heated, and therefore the plenum or pressure method of supplying is preferable to the vacuum or exhaust method. All local or direct heating surface is eliminated from the rooms, and may be massed in connection with the fan, thereby greatly simplifying the details of installation. The heating surface thus provided almost universally takes the form of a steam coil built up in sections.

The pipes, usually one inch in size, are here set two and one-eighth inches on centers, thus providing a free area for passage of air equal to about 40 per cent. of the gross area of the face of the section. The air passing through such a heater must be warmed by a contact. The increment due to radiation is very slight. Therefore the arrangement of pipes here shown, which thoroughly breaks up all currents, best serves the purpose by insuring intimate and constantly-changing contact.

The compactness of this construction is shown by the fact that within the space measured by six feet in length, seven feet in height and seven and one-half inches in thickness there may be massed nearly 1000 lineal feet of one-inch pipe. Such construction readily lends itself to manifold arrangements in connection with fans of various types. The most important feature of this type, familiarly known as a hot-blast apparatus, is that the rapid movement of air across the heated surface renders it vastly more efficient than when exposed in still air. In other words, far less surface is required for the same heat transmission.

The effect of moderate rates of air movement, as determined by Professor Carpenter for ordinary indirect radiators, shows that with a temperature difference of 150 degrees and direct radiation in still air, the heat transmission per hour per degree difference is about 1.85 B. T. U. per square foot, while with a velocity of ten feet per second it is increased to about

6 B. T. U. In other words, the heating surface becomes over three times as efficient.

In a hot-blast apparatus consisting of a fan and heater the heat transmission, when the air velocity is 1200 feet per minute, is on the average over five times as much as in the case of direct radiation; that is, a hot-blast apparatus need contain only one-fifth the surface required to secure a given result with direct radiation.

The design and manner of application of such an apparatus and the method of air distribution employed must of necessity depend upon the character of the building, its surroundings and its uses. The ordinary structure for manufacturing presents the simplest of problems. As a rule the per-capita space for the operatives is large, and the heating is to be considered as of paramount importance, while the ventilation, although sufficient with the blower system, is in a sense incidental; in fact, ample ventilation may be secured by allowing the fan to draw its supply from the building itself, thereby simply turning the air over and over, and merely adding to it the heat necessary to offset the transmission and leakage losses.

it is discharged through suitable outlets upon the several floors. In a wooden structure, or in one of brick or stone which is already built, such distribution must be made by means of galvanized-iron pipes.

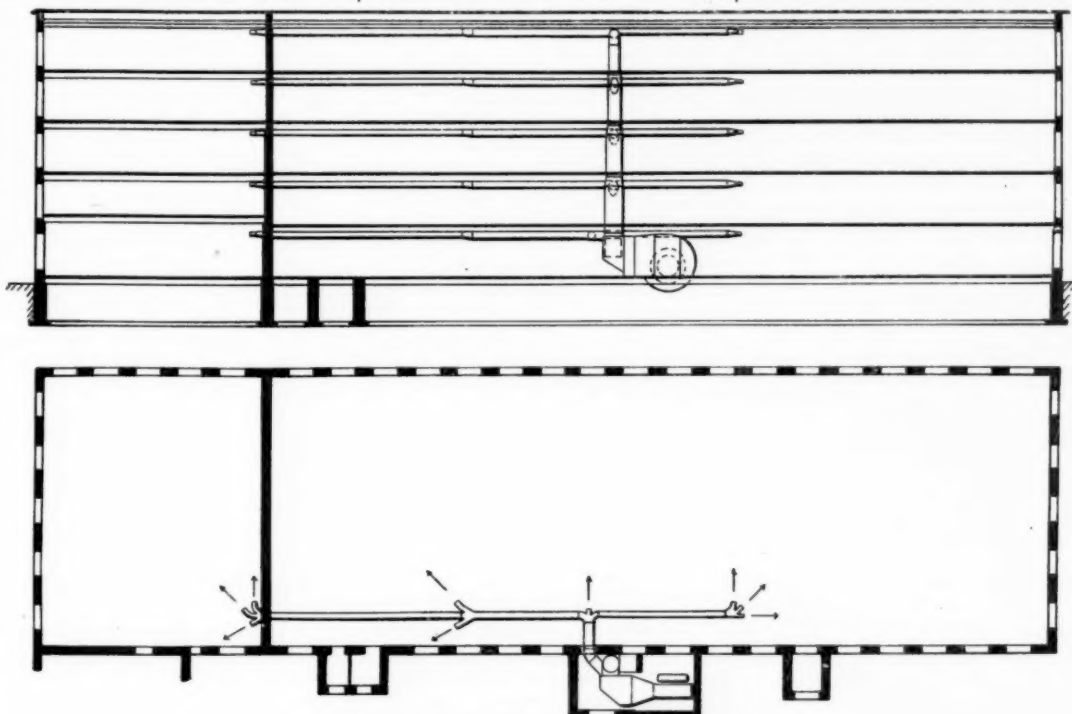
The simplest possible arrangement consists of a single upright galvanized-iron flue, immediately beneath which the apparatus is placed so as to deliver the air directly upward into the base of the flue. Upon each floor the requisite number of outlets are provided at or near ceiling level, and the air discharged therefrom towards the outer walls.

As the building becomes more extended in its character it becomes necessary with a single standpipe system to somewhat extend the branches so as to convey the air to a greater distance from the standpipe, as is clearly shown in the accompanying illustration of a heating and ventilating plant installed in the Montmorency Cotton Mills, Montmorency, P. Q., by the B. F. Sturtevant Co. of Boston, Mass. The apparatus is here placed in the basement, and discharges directly upward into the standpipe, which is carried up outside of the building, but thoroughly

inches area per 1000 cubic feet of space.

An important advantage of the blower system in the textile mill lies in the opportunity presented for moistening the air so as to offset the serious effect of frictional electricity generated by the motion of belts, pulleys, running stock and machinery. In a direct-heated mill the moistening arrangements are frequently very expensive.

An interesting comparison of first costs and running expenses in two nearly identical mills belonging to the same corporation may be mentioned. One mill was heated by direct radiation, and a complete independent moistening system was introduced. In the other the blower system was installed for the combined purposes of heating, ventilating and moistening. The cubic contents of the latter building was the greater, as was also the exposure. Nevertheless, the first cost of the system per 1000 cubic feet was only 73 per cent. of that in the first mill, while the temperature maintained was much higher, with a fuel expenditure of only 64 per cent. of that required in the first mill. Although the air supply was taken from the building, the natural leakage was so



MONTMORENCY COTTON MILLS, MONTMORENCY, P. Q.

To this end it is most desirable that the apparatus be placed as near the center of the building as possible, so that the air may be drawn back to it from all sides. Such location also simplifies the distributing system and reduces the cost.

From the apparatus the air may be conducted by underground ducts or overhead pipes to its proper destination. Inasmuch as the best results are secured by discharging the heated air above head level in a horizontal or slightly downward direction and towards the outer walls, it is usually most convenient in a one-story factory building to carry the piping overhead.

For factory heating, the main discharge pipe leading from the fan is generally of the same area as the outlet. The resistance of branches is compensated for by increased area, so that the aggregate area of the outlets will range from 25 to 40 per cent. in excess of the fan outlet, and the corresponding discharge velocities will be decreased to 2800 or 2500 feet, or even lower where the resistances are great.

In buildings of more than one story, the simplest arrangement for heating consists in placing the apparatus on the lower floor or in the basement, and delivering the air into one or more vertical flues, from which

protected, while the horizontal pipes on the various floors are kept comparatively near the wall.

The apparatus is usually placed in the basement, near the center of the building, and discharges the air into a duct running along one side of the building and communicating with the bases of the flues.

These flues add but little to the cost of the building. Each opening or outlet is provided with a special form of damper, which serves the double purpose of deflecting the air toward the room when open, and of preventing admission when closed.

The large amount of moving machinery, pulleys, shafting and belts in such a building serves to thoroughly break up all air currents and effectually distribute the air. The equality of temperature maintained is evidenced by average results and readings taken at random from records kept of a Massachusetts mill.

The mill was 440 feet long and 70 feet wide. The west end was entirely exposed to sweeping winds from the Merrimac river, while the east end contained the lighting plant and heating apparatus. The openings for air admission were only five in number on each floor along the south side, aggregating 2.37 square

feet as to provide ample ventilation.

The particular features of this combined system of ventilation and heating may be thus summarized. The entire heating surface is centrally located, enclosed in a fireproof casing, and controlled by a single individual, avoiding the possibility of damage by leakage or freezing incident to a scattered system of steam piping and radiators. The heater itself is adapted for either live or exhaust steam, and provision is made for utilizing the exhaust of the fan engine, thereby reducing the cost of operation to practically nothing. At all times ample and positive ventilation may be provided with air tempered to the desired degree. Absolute control may be had over the quality and quantity of air supplied. It may be filtered and cleansed, heated or cooled, dried or moistened at will. By means of the hot and cold system the temperature of the air admitted to any given apartment may be instantly and radically changed without the employment of supplementary heating surface.

The pressure created within the building is sufficient to cause all leakage to be outward, preventing cold inward drafts and avoiding the possibility of drawing air from any polluting source within the

building itself. By returning the air, using live steam in the heater and operating the fan at maximum speed, a building may be heated up with great rapidity, as is usually desirable in the morning.

The area of heating surface is only one-third to one-fifth that required with direct radiation, while the primary cost and operating expense of a fan is far less than that of any other device for moving the same amount of air.

The system is essentially a necessity in buildings occupied as halls of audience, and may be readily introduced in the mill and the factory. The increasing extension of electric-power and fuel-gas distribution is making possible its application in all classes of buildings. Full appreciation of its advantages is therefore the best guarantee of its introduction.

TO PUSH TEXAN INTERESTS.

Purposes of an Association of Commercial Clubs.

[Special Cor. Manufacturers' Record.]

Austin, Texas, January 31.

The formation here last week of the Texas Commercial Association, an organization of commercial clubs of the State growing out of a movement started by the wide-awake business men of El Paso, is expected to be of great practical benefit. There were present representatives from Dallas, Waco, San Antonio, Paris, Fort Worth, Houston, Denison and El Paso, and a spirit of determination to push Texas was manifested in the papers read, in the discussions, and in the definite action taken, which included plans for a meeting at Dallas on April 9 and 10. Resolutions were adopted favoring a constitutional amendment which shall grant freedom from taxation for ten years to all factories located in the State during the next twelve years, and also favoring the appointment of a State industrial commissioner, who shall know the resources of the State, be able to point out eligible locations for various factories and advise communities of the steps necessary to be taken to locate and establish factories.

The delegates were fully alive to the necessity of such modification of existing State laws as shall attract, and not repel, outside investors. It was evident that the delegates regard the present prosperity of Texas as furnishing an occasion for successful effort, and a determined movement all along the line is to be made for immigration and manufactures.

ALBERT PHENIX.

A special meeting of the Charleston Mining & Manufacturing Co. was held on the 5th inst. at Fetteressa, S. C., for the purpose of considering the question of issuing \$1,000,000 of coupon bonds, to be secured by a mortgage of its property, franchise and plant, in order to manufacture phosphate rock into acid phosphate. The consensus of the meeting was in favor of extending the company's business, but the majority opposed the mortgage plan. A special committee of the stockholders has the matter in charge. It is understood, however, that the company in the near future may with new capital erect large and modern up-to-date works for the manufacture of its entire output of phosphate rock.

During the past week a large party of business men of Cincinnati has, at the invitation of Mr. D. A. Tompkins, been making a trip through the Southeastern States, visiting leading centers of industry. The party traveled in a special train of the Southern Railway, and was accompanied by Mr. M. V. Richards, the land and industrial agent of that system.

American Cotton Co. in January shipped 64,664 roundlap bales, mostly to Europe.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., February 13.

While the trading in phosphate rock has been light during the week in a local way, the prospects are better for a good trade in early March. There has been some inquiries from out of town for Tennessee and Florida rock, but few actual sales are reported. The following charters were reported last week: A Spanish steamer, 1652 tons, from Pensacola to Bayonne or La Pallice with Tennessee phosphate rock at 20¢, February; Spanish steamer Ollargan, 1450 tons, from Girgenti or Licata to New York with sulphur at 7/6; schooners W. C. Tanner, 982, and Independent, 1100 tons, from Port Tampa to Baltimore with phosphate rock at \$1.75, and schooner Agnes Manning from Carteret to Baltimore with fertilizer at 90 cents. The advices from points of production indicate a better movement from all Southern phosphate ports in the early spring. The situation in South Carolina shows improvement, and under easier freight rates and a better demand in sight mining will show more activity. At Florida ports there is considerable rock being shipped abroad, as well as to coastwise ports. Miners are sending forward more rock from both land and pebble sections, and prices continue to rule firm, especially for pebble. The parent industry of kaolin is taking on better form, and operations so far are reported very successful. In Tennessee there has been very unfavorable weather for mining; the market, however, is very steady, with holders firm, with prospects rather favorable for a good spring business in both domestic and foreign rock. The foreign business is especially brisk as to shipments, over 10,000 tons having left Pensacola from the 1st to the 13th, inclusive. The market at Mt. Pleasant is reported as follows: 78 per cent., 4½ to 2, prompt shipment, \$3; 78 per cent., 3 to 4-2, 1901 delivery, \$3.50; 75 per cent., 5-3, prompt shipment, \$2.75, and 75 per cent., 5-3, 1901 delivery, \$2.75 to \$3.

Fertilizer Ingredients.

The local market is fairly active, with the leading ammoniates steady to firm. Stocks in the West are not excessive, and are fairly held at outside figures. Nitrate of soda is quiet and steady, with near deliveries firm. Sulphate of ammonia is firmer, with spot lots held at outside figures.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)....	\$2 75 @ 2 80
Nitrate of soda, spot Balto....	2 00 @ 2 10
N. York.....	1 82½ @ —
Blood.....	2 50 @ 2 55
Asotone (beef).....	2 47½ @ 2 50
Asotone (pork).....	2 47½ @ 2 50
Tankage (concentrated).....	2 47½ @ 2 50
Tankage (9 and 20).....	2 45 & 10¢ 2 50 & 10
Tankage (7 and 30).....	20 50 @ 21 00
Fish (dry).....	27 50 @ 30 00

Phosphate and Fertilizer Notes.

The British steamship Argo cleared last week from Pensacola with 4500 tons of Tennessee phosphate rock and other cargo.

The British steamship Plata cleared from Savannah for Bremen last week with 2000 tons of Florida phosphate rock and other cargo, and the steamship Blake-moor for Glasgow with 2300 tons.

It is stated that the Louisville & Nashville Railroad is now moving 2000 carloads of phosphate rock from Mt. Pleasant, Tenn., to Pensacola, Fla., all over its own lines direct for shipment to Cuba.

The American Kaolin Co. is preparing the foundation for an extensive plant at Yallaha, Fla. The plant of the company west of Yallaha is in operation, and the

beginning of this mining industry is satisfactory.

J. B. Preacher of Newberry, Fla., is engaged in prospecting 600 acres of land in Albion county for phosphate. He will also prospect a tract of land for phosphate rock belonging to Dr. Jackson of Bronson, Fla.

Messrs. J. M. Lang & Co. of Savannah, Ga., report the shipments of high-grade Florida phosphate rock through that port for the month of January at 9386 tons, of which 6629 tons went to Bremen and 2757 tons to Rotterdam.

The Southern Phosphate Co., with phosphate mines near Standard, Fla., shipped fifty cars of rock last week, and expects to ship 100 cars more in a few days. This plant, under the charge of Capt. J. B. Wilcox, is one of the most complete in the State. The Newberry phosphate mines, Alice and Don Hazel are all now running at full capacity.

The special committee of the agricultural board of the North Carolina legislature appointed to draft amendments to the law regarding fertilizers completed its work on the 6th inst. The bill thus prepared leaves tax on commercial fertilizers twenty cents per ton, and provides that untaxed fertilizers shall be sold without recourse to courts. The present law requires 8 per cent. phosphoric acid and declares a fertilizer without this illegal.

The extensive plant of the Atlantic Fisheries Co. on the Cape Fear river at Fort Anderson, N. C., is being vigorously pushed to completion. The company is erecting an extensive oil and fish scrap manufactory at Fort Anderson, and already a dozen buildings have been erected. The machinery for manufacturing oil and fish scrap will be on an extensive scale. The process and the machinery are the inventions of Capt. J. F. Bussells, the general manager of the company.

In phosphate circles the recent invention of Prof. F. J. Machalske of Long Island City, N. Y., by which he derives pure phosphorus direct from phosphate rock or bones without the aid of acids, has been widely discussed by experts and others engaged in the phosphate industry. Professor Machalske has also certain processes for making bisulphide of carbon from sulphate of ammonia, which is obtained as a by-product in the manufacture of bone black, also cyanides and ferro-cyanides from nitrate of soda, and arabic gum from beet roots and the refuse of sugar beets. The professor's theory is that phosphorus is made directly from phosphate rock, raw and unmined, without any additions or preparations, which produces yellow or red phosphorus from rock at a low cost. The Anglo-American Chemical Co., of which Professor Machalske is chemist and vice-president, has been during the past year conducting a series of experiments, and it is stated has demonstrated that phosphorus can be abstracted from phosphate rock by means of a powerful electric arc. The company has erected two electrical furnaces, condensers, etc., for the manufacture of yellow and red phosphorus principally from phosphate rock by means of the intense heat of an electric arc. To reduce the expense of making phosphorus Professor Machalske has devised two electrical furnaces and other machinery which will be used by the Anglo-American Chemical Co. in its future operations in manufacturing. It is stated that this process in producing phosphorus will affect the phosphate-rock market favorably, and also produce phosphoric acid cheaper than by the use of sulphuric acid.

TRADE NOTES.

General Store Offered.—An established and profitable general store in an agricultural district is offered for sale. Inventory is nearly \$5000. J. F. P., care Manufacturers' Record, can give information.

Bullock Electric in Buffalo.—The Bullock Manufacturing Co. has recently established an office at Buffalo, N. Y., 675 Ellicott Square, under the management of Francis B. Smith, an electrical engineer of wide practical experience.

Industrial Water Purifier.—The Industrial Water Purifier Co. of Chicago announces its change of name to the Kennicott Water Softener Co., 3567 Butler street. This action is taken because of a similarity of the former name with another concern in the same branch of business.

Oil Filters to Finland.—The demand for the Cross Oil Filter continues and increases. The superior merits of this device attract the attention of users all over the world. The Burt Manufacturing Co., Akron, Ohio, manufacturing the filter named, shipped a half-dozen to Finland last month.

Cotton Mill Offered.—A good opportunity to acquire a Southern cotton factory by purchase or lease is now offered by J. A. Wiggs, Starkville, Miss. The mill is located in the cotton fields and near water-power, and has shipping facilities. Present owners desire to be relieved of the management because of other interests.

Portable Pneumatic Punch.—Recent reference to the Caskey Portable Pneumatic Punch has interested many machine-tool users. This admirable machine has merits that appeal to the most discerning among machinists, and there is anticipated a strong demand for it. The Pike & Child Company, Bourse Building, Philadelphia, is agent for marketing this punch.

Mill and Railway Supplies.—L. C. Gugel, formerly general storekeeper of the Central of Georgia Railroad, is now in charge of the railroad-equipment department of Walter A. Zelnicker in St. Louis. Mr. Zelnicker makes a specialty of supplies of all kinds for railways, mills, factories, etc. An especial machine now on hand for sale is a steam shovel as good as new, offered at low price.

York Ice Machine.—The general and particular merits of the York Ice Machine appeal both to the experienced and inexperienced ice manufacturer. Many Southern companies have purchased the machine, and found it to enable its owner to conduct a profitable and successful business. The People's Ice Co. of Charlotte, N. C., is the latest Southern concern to buy the York machine, made by the York (Pa.) Manufacturing Co.

Wants Capital.—Possessors of valuable lands adapted to development frequently lack the necessary capital to thoroughly develop their property. Investors who supply the capital in such instances usually find most acceptable returns. E. B. Bailey of Monticello, Fla., is desirous of arranging for capital to develop such property. This includes 11,000 acres of land, 4000 of which is in cultivation, and supplied bountifully with water, timber, watercourses for irrigation purposes, etc. Correspondence is invited.

Anent Belting.—When you think of belting think of Williams. This advice is of a character that will result in thinking of belting demanded by manufacturers and power users everywhere. The merits of Williams' make of belting are known widely, and becoming better known every day. Messrs. I. B. Williams & Sons of Dover, N. H., manufacture the belting referred to. Their Defiance belting is cut from pure oak-tanned butts, carefully made in every detail and recommended as to material and workmanship for faithful service. The Messrs. Williams also make other brands of belting. Users are invited to investigate.

Praising Exhaust Head.—The B. F. Sturtevant Co. of Boston recently received the following unsolicited letter from the Widdcomb Furniture Co., Grand Rapids: "Enclosed we hand you check for exhaust head, which was applied yesterday and found to be the most efficient device for the purpose the writer has ever seen. The condition of the atmosphere this morning is one of extreme moisture, which certainly would display any spray passing out with the steam, but not a particle of moisture can be found in the air, and that even within twelve inches from the exhaust steam. As we have to purchase our water supply, the device will soon pay for itself."

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Bessemer—Coal Company.—The Export Coal & Railway Co. has increased its capital stock to \$100,000 from \$30,000.

Birmingham—Furniture Factory.—M. F. McCarty, J. J. McCarty of Anniston and others have incorporated the McCarty-Rawson Furniture Co., with capital stock of \$10,000.

Birmingham—Brick Works.—Guerry Stevens and associates will reorganize the old Stevens Brick Co., whose works were burned some years ago. New machinery will be installed and the plant put in operation. It was reported a few weeks ago that a company was being formed for the manufacture of brick.

Birmingham—Brass, etc., Foundry.—The G. L. Anderson Brass & Bronze Co. has been incorporated, with capital of \$12,000, to succeed the G. L. Anderson Company, Limited, operating brass and bronze foundry; a new plant will be built and the manufacture of machinery and railroad brasses added. G. L. Anderson is president, and Abe Rich, secretary and treasurer.

Birmingham—Furnace.—C. E. Buck of the Atlanta Iron Ore Co. of Atlanta, Ga., has purchased the Trussville blast furnace at Trussville and will thoroughly repair and overhaul and greatly increase its capacity.

Decatur—Brick Works.—The Huntsville (Ala.) Brick Co. will install brick works at Decatur, as lately reported, with daily capacity of 30,000 brick.

Gadsden—Iron-ore Mine.—The Alabama Consolidated Coal & Iron Co. of Birmingham has purchased a large iron-ore property, including a mine having an output of 200 tons of ore a day, located near Gadsden.

Hedlin—Gold Mine.—J. M. Stevenson will install new machinery and reopen the Arbacochee gold mines.

Huntsville—Saw-mill.—The Lewis Lumber Co., B. A. Lewis, president, will rebuild its \$10,000 saw-mill, reported burned.

Huntsville—Cotton Mill.—The Rowe Knitting Co. has been organized, with W. H. Rowe, Jr., Mrs. Francis J. W. Rowe and H. T. Day as directors and a capital of \$30,000; company will build and operate the yarn and spinning mill referred to recently.

Mobile—Orchards.—Incorporated: Mobile

Peach Orchards, capital \$500, by Chas. W. Webb, S. P. Gaillard and Chas. A. Hall.

Troy—Electric-light Plant.—The Troy Fertilizer Co. has recently installed an electric-light plant.

Tuscaloosa County—Coal Lands.—H. F. De Bardeleben of Birmingham, Ala., reported as leasing 2733 acres of coal lands in Tuscaloosa county, has, with William F. Pinckard and William A. Jackson, incorporated the De Bardeleben Coal & Coke Co., with capital stock of \$250,000. Company has headquarters in Birmingham, and will develop the property. Preparations are also being made to erect manufacturing plants, build a new town, etc.

ARKANSAS.

Huntington—Electric Plant.—The Huntington Electric Light & Power Co. has been incorporated, with capital of \$9000, by Wm. Harper, J. H. Thompson, H. Mayer, H. F. Rogers and others.

Little Rock—Mercantile.—Chartered: The Franklin Merchandise Co., with capital stock of \$25,000, by Henry M. Myer (president).

Little Rock—Mercantile.—Franklin Bros. Co. has been chartered to succeed the H. J. George Grocer Co.; capital stock \$25,000; Jno. A. Franklin, secretary.

Pine Bluff—Electric-light Plant.—The Bluff City Lumber Co. has applied for lighting franchise.

Prescott—Flour Mill and Gin.—The Prescott Milling & Gin Co., lately reported organized, will gin cotton and later on engage in milling flour.

FLORIDA.

Bristol—Sugar Refinery and Gin.—R. H. Tuton and J. L. Firehand will erect a cotton gin and sugar refinery.

Jacksonville—Paint Factory.—E. C. Long, C. E. Garner and others are organizing the Florida Aluminum Paint Manufacturing Co. for the manufacture of paint from aluminum.

Live Oak—Electric-light Plant.—C. Y. Byrd will establish the electric-light plant noted during the week.*

Tampa—Light and Water Supply.—The city is arranging to acquire an established water-works, and contemplates erecting a lighting plant; A. C. Moore, president of council.*

Waukeenhah—Knitting Mill.—W. P. Bellinger is interested in the establishment of a knitting mill.

GEORGIA.

Albany—Oil Mill.—The Planters' Oil Co. has been organized, with capital stock of \$25,000, to build and operate an oil mill, by S. W. Brown, A. W. Muse, J. W. Mock, J. A. Johnson and others.

Ambrose—Lumber Mills.—The Wadley Lumber Co. is erecting another mill of 40,000 feet capacity, thus doubling its output daily.

Americus—Foundry and Machine Shop.—J. R. Cook & Son (lately reported) are rebuilding and enlarging their present foundry and machine shop.

Atlanta—Electric-light Plant.—The Atlanta Railway & Power Co. has received franchise for construction of its proposed electric-light plant.

Atlanta—Lumber Mills.—A. T. Deadwyler, A. S. Byres and T. W. Deadwyler have incorporated the Deadwyler-Byres Lumber Co., with a capital stock of \$10,000, for constructing saw-mills.

Bostwick—Flour Mill.—John Bostwick will build a roller process flour mill.

Canton—Gold Mine.—Northern parties will, it is reported, reopen the old Daniel Putnam mine. Address Capt. J. O. Robertson.

Canton—Electric-light Plant.—Capt. T. M. Brady will install an electric plant for lighting his marble works, and probably install plant large enough for lighting the town.

Cedartown—The Standard Oil Co. will erect large stationary tanks at Cedartown to hold several thousand gallons of coal oil. Address E. R. Pugh, Atlanta, Ga., general manager for Georgia.

Dahlonega—Gold Mine.—J. F. Moore, secretary of the Crown Mountain Gold Mining Co., is opening a new mine, and will probably erect a 10-stamp mill.

Dahlonega—Gold Mines.—R. C. Thomas of Dahlonega; Dr. Thomas H. Hicks of Fort Wayne, Ind.; Frank G. Thomson of Toledo, Ohio; Frank R. Adams of Delaware, Ohio,

and J. W. Adams of Chattanooga, Tenn., have organized a \$3,000,000 company for the development of gold mines in Lumpkin county, under the Hicks process.

Dawson—Oil Mill.—Carter & Riley will erect a cottonseed-oil mill.

Douglas—Woodworking Factory.—Harper, Anderson & Cornell will establish a variety woodworking factory.

Dublin—Light and Water Plant, etc.—The city will determine March 12 an issue of \$25,000 of bonds for erection of new school building and for enlarging the light and water plant. Address "The Mayor."

Elberton—Electric-light Plant.—The establishment of a municipal plant is being considered. Address "The Mayor."

Fitzgerald—Syrup Mill.—Oliver Way will plant several acres of sugar-cane this season, and next season manufacture syrup.

Fitzgerald—Bank Building.—Captain Phillips will contract for the erection of a bank building.

Fort Valley—Electric-lighting Plant.—Crandall & Gray contemplate establishing an electric-light plant.

Fort Valley—Electric-light Plant.—Proposition has been made for the erection of an electric-light plant. Address "The Mayor."

Hawkinsville—Electric-light Plant and Ice Factory.—The city has granted franchise to Renfro & Lyons of Opelika, Ala., for electric-light plant and ice factory. These parties will incorporate as the Hawkinsville Light & Ice Co. and erect the plants for operation by May 1.

Lumpkin—Water-works.—The city will vote on the issuance of \$10,000 of bonds for construction of water-works. Address "The Mayor."

Macon—Medicine Factory.—Max Morris, Joseph G. Morris and Hortense Morris have incorporated the Max Morris Drug Co., with capital stock of \$8000.

Riceboro—Gin, Corn and Rice Mill.—E. M. O'Neal has established corn mill and cotton gin, and has just added a rice cleaner.*

Rossville—Cannery.—S. W. Divine of Chattanooga, Tenn., will organize the North Georgia Land & Improvement Co. to promote fruit cultivation, build cannery, etc.; capital stock to be \$50,000.

Tifton—Woodworking Factory.—S. Harrell contemplates erecting a sash, door and blind factory.

Valdosta—Saw-mills.—The Dooly Lumber Co. has purchased at \$30,000 from T. B. Young 10,000 acres of timber lands. Saw-mills will be located on the tract.

Valdosta—Ice Factory.—The Valdosta Ice Co. will enlarge and increase capacity of its ice factory.

Valdosta—Ice Factory.—The Valdosta Ice Co. will increase capacity of its plant.

Valdosta—Electric-light Plant.—C. Y. Byrd of Live Oak, Fla., will erect an electric-light plant.*

Valdosta—Lumber Company.—J. A. Dasher, Jr., E. W. Lane, J. M. Briggs, Robert Dasher and others have incorporated the Valdosta Lumber Co., with capital stock of \$30,000, and privilege of increasing to \$200,000, to conduct general lumber business.

Waycross—Turpentine Still.—Kettiver & Deen are rebuilding their turpentine still, recently burned.

KENTUCKY.

Ashland—Telephone System.—The Hanover & Henrico Telephone & Telegraph Co. has been chartered, with capital stock of \$5000, by W. C. Saunders, E. S. Campbell, M. D. Hart, E. L. C. Scott and John G. Pollard, to conduct general telephone and telegraph business.

Lexington—Telephone System.—Incorporated: The Fayette Home Telephone Co., capital \$25,000, by J. R. Allen, T. W. Bullock, J. H. Shouse, Chas. Kerr and L. G. Coe.

Louisville—Tobacco Factory.—Doerhoefer Bros. have purchased site for erection of their proposed tobacco factory.

Louisville—Cigar Factory.—Max Edelmuth has secured larger building and will increase capacity of his cigar factory.

Louisville—Tobacco Factory.—The Monarch Tobacco Co. has been incorporated to establish the tobacco factory recently noted as proposed by Doerhoefer Bros. The incorporators are Basil Doerhoefer, Edward Coggeshall, C. W. Depew, J. T. O'Neill and others. It is rumored that \$2,000,000 will be invested in the plant.

Somerset—Furniture Factory.—J. P. Hornaday and associates are organizing a company for the manufacture of furniture, including kitchen safes.*

LOUISIANA.

Alexandria—Drainage Work.—The levee board has awarded contract to the Gulf Dredging & Timber Co. of New Orleans for drainage work in the district.

Donaldsonville—Rice Mill.—The Donaldsonville Rice Mill Co. has been incorporated, with capital stock of \$60,000, for the erection of a rice mill of from 1500 to 2000 sacks per day. A. Kaplan will have charge of construction of the plant. Robert Nicholls Sims is president, and Simon Le Blanc, vice-president.

Jennings—Rice Irrigation.—The Illinois Canal & Rice Co., lately reported as incorporated, has organized, with E. F. Rowson, president; Geo. Conover, vice-president, and J. F. Miller, secretary. Company will construct canals for rice irrigation. Capital stock is \$150,000.*

Lake Charles—Publishing.—T. L. Palmer, S. E. Wetherell and others have incorporated the Press Company, Limited, with capital stock of \$15,000, for publication purposes.

Minden—Cotton Mill.—Efforts are being made to establish a cotton mill. John N. Murrell is interested.

Monroe—Cotton Mill.—The establishment of a cotton mill is talked of. Address C. L. Goodenough or R. O. Alexander, who are interested.

New Orleans—Real Estate, Timber Lands, etc.—A. J. Cranor, A. L. Cranor, J. O. Govland and others have incorporated the A. J. Cranor Company, Limited, to deal in real estate, timber lands, etc.; capital stock \$25,000.

New Orleans—Steamship Company.—A company has been organized, with capital stock of \$1,000,000, and Jacob Weinberger, president, for the purpose of chartering ocean-going vessels.

New Orleans—Furniture Factory.—Lhote & Co. have established a furniture factory.

New Orleans—Mercantile.—Clarence R. Willson, E. E. Lucas and T. E. Lucas have incorporated the Willson-Lucas Co., Limited, for mercantile purposes; capital stock \$5000.

Newroads—Cotton Mill.—A. T. Henderson is interested in a movement to organize company to build cotton factory.

Opelousas—Sewerage and Water-works.—The city has appropriated \$2500 for extending water-works system, and a committee has been appointed to ascertain the cost of constructing sewerage system; B. A. Littell, mayor.

Plaquemine—Saw-mill.—Lyman G. Nichols will erect large saw-mill.

Zwoole—Lumber Mill.—Noah P. Sanderson, Joseph P. Towery, Randall Moore and J. W. Ferguson, all of Texarkana, Texas, have organized a stock company, with capital stock of \$125,000, to manufacture lumber, and purchased the plant of the H. J. Allen Lumber Co. at Zwoole.

MARYLAND.

Baltimore—Gas Mains.—The Consolidated Gas Co. will extend its mains into the annex section of the city.

Baltimore—Brick Works.—The Wanamaker Clay Manufacturing Co., reported lately as incorporated, will manufacture vitrified brick and block for paving and sewer brick; plant will have capacity of 100,000 per day. Address Isaac O. Harper, 921 Calvert Building.

Baltimore—Water-works Improvements.—The city will make extensive improvements to Lock Raven water supply, probably doubling its capacity; probably \$100,000 and more will be expended. Alfred M. Quick is engineer.

Baltimore—Chemical Company.—Incorporated: The Glycol Chemical Co., capital \$10,000, by W. W. Duval, John F. Williams, Albert W. Cooper and others.

Baltimore—Sugar Factory.—The Baltimore Security & Trading Co., Thos. J. Hayward, Thos. K. Carey, each of Baltimore, Henry P. Scott and John G. Gray of Wilmington, Del., have incorporated the National Sugar Manufacturing Co. for dealing in, manufacturing and refining sugar; capital stock is \$100,000.

Cumberland—Coal Lands.—Philadelphia (Pa.) parties are investigating with a view to purchasing and developing 25,000 acres of coal lands near Cumberland. A. M. Inskip, Aaron Seymour, Joseph Cunningham and

Edgar Harness of Moorefield, W. Va., own the property.

Elkton—Ice Factory.—The Elkton Ice Co. has been chartered, with capital stock of \$25,000, for erection of the eight-ton ice factory reported during the week. John S. Wirt, Geo. R. Ash, George S. Woolley, O. C. Giles and others are the incorporators.

Ellicott City—Electric-light Plant.—The Baltimore & Ellicott City Light & Power Co., reported recently as organized by Geo. L. Mowen of Baltimore and others for the operation of Ellicott City electric-light plant, will increase capacity of the works by 400 lights and later install an entirely new plant.

Pinksburg—Flint Mills.—George Miller, 709 South Broadway, Baltimore, and associates have leased and will develop flint properties in Carroll county. They will establish plant for calcining the flint and sell to grinders.*

Love's Point (not a postoffice)—Piers.—The Queen Anne Railroad Co., W. H. Bosley, president, Baltimore, Md., will make extensive improvements at a cost of \$330,000, including the construction of piers at Love's Point, which will be built by Sanford & Brooks.

Port Deposit—Electric-light Plant.—The Jacob Tome Institute has purchased the plant of the Port Deposit Electric Light Co. and will enlarge same by installing new dynamos, etc.

Swanton—Coal Mines.—W. S. Sharpless and F. R. Sharpless are developing coal lands in Garrett county, and contemplate arranging for better transportation facilities and the enlargement of their mines.

Washington, D. C.—Metal and Wood Works.—The Doremus Novelty Works Corporation has been incorporated for the manufacture of novelties in metal and wood; capital stock to be \$10,000; George C. Johnson, president; Wm. C. Bryan, secretary-treasurer, and W. L. Doremus, manager.

MISSISSIPPI.

Beulah—Cotton Gin.—The Delta Gin Co. has been incorporated, with capital stock of \$4000.

Clarksdale—Water-works.—A system of water-works will probably be constructed. Address Jas. A. Dolan.

Columbus—Brick Works.—The Columbus Brick Co. has improved its works, adding new dry-kilns, additional machinery, etc.

Corinth—Woolen Mill.—The Corinth Woolen Mills has been organized, with S. H. Curlee, president; J. R. Curlee, vice-president, and J. C. Stanley, secretary; capital stock is \$52,500.

Ellisville—Electric-light Plant and Water-works.—The city will issue \$15,000 of bonds for erection of the electric-light plant recently reported and for construction of water-works. Address "The Mayor."

Hattiesburg—Ice Factory.—The Hattiesburg Ice Co. will rebuild its factory recently burned.

Jackson—Hardware.—The Jackson Hardware Co. has been incorporated, with capital stock of \$10,000, by Eugene Simpson, J. P. Farrell and E. G. Peatross.

New Albany—Oil Mill.—A company is being organized by John F. Guydon and others for the erection of a cottonseed-oil mill.

Ocean Springs—Bridge.—County supervisors have authorized the construction of a steel bridge across Fort bayou and the issuing of \$10,000 of bonds for bridge purposes.

Vicksburg—Water-works.—It is reported that the city will construct a new system of water-works; W. L. Polk, city engineer.

MISSOURI.

Carthage—Manufacturing.—The Parrott Manufacturing Co., capital \$20,000, has been incorporated by G. W. Barnhart, E. T. Haraway and others.

Independence—Safety-car Company.—The Page Safety-Car Co. has been chartered, with capital stock of \$200,000, by J. E. Page, J. Luff and others.

Kansas City—Oil Company.—Chartered: The Hickla Oil Co., capital stock \$130,000, by D. G. Saunders, Fred W. Vaughan, L. D. Price and I. P. Ryland.

Kansas City—Electric-power Company.—The Spring River Electric-Power Co. has been incorporated, with capital stock of \$50,000, by F. O. Chesney and E. C. Chesney.

Kansas City—Cemetery.—Chartered: The Mount Washington Cemetery Co., with capital stock of \$10,000, by C. F. Morse and others.

Montgomery City—Telephone Company.—The People's Telephone Co. has been incorporated, with capital of \$3100, by H. Ellis of New Florence, T. Marlow of Americus, W.

Crane of Minneola, W. Crockett of Montgomery City and others.

St. Louis—Mining.—The Midvale Mining & Manufacturing Co. has been incorporated, with capital stock of \$25,000, by F. C. White, F. P. Fay, J. E. Cartwright and others.

St. Louis—Tent Company.—Chartered: Daugherty Bros. Tent & Awning Co., with capital stock of \$10,000, by James Daugherty, M. Sullivan, J. A. Cordeau and others.

St. Louis—Distillery.—The Bloeser Distilling Co. has been incorporated, with capital stock of \$5000, by M. B. Bloeser, John Bloeser and E. H. Bloeser.

St. Louis—Mining.—The Valley Mining Co. has been chartered, with capital stock of \$4000, by B. G. Chapman, H. W. Baker and J. E. Hereford.

St. Louis—Foundry, etc.—E. C. Hampeter will establish an iron foundry, to be equipped with cupola and motors; a general line of iron and brass beds and springs will be manufactured.

St. Louis—Cornice Works.—The South St. Louis Cornice Works Co. has been incorporated, with capital stock of \$2500, by R. Hornberg, L. Hopmann, Harry Hopmann and others.

NORTH CAROLINA.

Andrews—Tannery.—F. P. Cover & Son have established the tannery reported last week; capacity is 200 sides daily.

Asheville—Sanitarium.—Chas. A. Webb and J. M. Campbell of Asheville and W. C. Clark of New York have incorporated the Koch Lung Co., capital \$2500, to conduct sanitarium, etc.

Asheville—Lumber Company.—The W. T. Mason Lumber Co. is being organized, to have capital of \$125,000.

Burlington—Furniture Factory.—The Burlington Furniture Manufacturing Co., recently organized, will establish a plant for the manufacture of furniture; capital stock is \$50,000. F. L. Williamson is president.

Charlotte—Brick Works.—W. H. Houser has purchased and will operate the brickyard of E. Ross Asbury.

Charlotte—Brick Works.—W. H. Houser confirms the report that he has purchased Asbury's Brick Yards, but at present does not contemplate adding any new machinery.

Greensboro—Cotton Company.—The Piedmont Cotton Co., capital \$50,000, has been incorporated by L. J. Brandt, T. W. Wade and W. R. Patterson.

Hickory—Woodworking Factory.—M. E. Thornton contemplates establishing a factory for bobbins, shuttles, spools, etc.*

High Point—Chair Factory.—Harvey Davis will build and operate a chair factory; site has been bought.

High Point—Table Factory.—The Piedmont Table Co. is erecting another dry-kiln.

High Point—Sash, Door and Blind Factory.—E. M. Armfield is president; J. J. Welch, vice-president, and John H. Tate, secretary and treasurer of the American Lumber Co., reported recently as incorporated for the establishment of a sash, door and blind factory.

Lincolnton—Bowling Alley.—J. Thos. McLean Co. contemplates erecting a bowling alley.

Mount Airy—Electric-power Plant.—It is reported that the city contemplates purchasing and developing the Buck Shoals water-power for municipal lighting. Address "The Mayor."

Pine Bluff—Conduit Factory.—The Southern Conduit Co. is erecting a factory for the production of wooden electrical conduits, treated to be waterproof and resist electricity; will use water-power to run factory.

Pine Bluff—Cotton or Hosiery Mill.—John T. Patrick will erect building 60x120 feet, four stories high, to be supplied with power from water development. Applications have been made for space in the building by a cotton factory and a hosiery mill.

Pine Bluff—Electric-light Plant.—The Pine Bluff Electric Light Co. has been organized recently, and is now constructing lighting plant. Machinery has been purchased.

Pine Bluff—Water-works and Power.—The Pine Bluff Water Co. awarded contract recently to G. O. Sanders, 39 State street, Boston, Mass., for the construction of \$25,000 water-works and power plant. Work is now in progress, and plant will include a 30-acre lake created by a dam 20x350 feet, 50,000-gallon tank, four miles of pipe, seventy-five horse-power for water-wheel, etc.

Raleigh—Mercantile.—The National Five & Ten Cent Co., lately noted as incorporated, states that its capital stock is \$25,000, and not \$2500, as had been reported.

Raleigh—Water-works and Sewers.—A bill has been introduced in the legislature to ap-

propriate \$25,000 for University of North Carolina; \$7000 to complete the water-works and sewers at university.

Rutherfordton—Cotton Mill.—The Cliffside Mills has been incorporated, with capital stock of \$80,000, by T. B. Lovelace, R. R. Haynes, Henry Jenkins, L. A. Holland and others.

Scotland Neck—Knitting Mill.—The Lockland Mills has been incorporated, with capital stock of \$10,000, and privilege of increasing to \$50,000, by G. T. Andrews and others, for the manufacture of hosiery and underwear.

Scotland Neck—Electric Plant and Water-works.—An electric-light plant and water-works will probably be constructed. Address "The Mayor."

Scotland Neck—Electric and Water Works.—The mayor states that no action is contemplated at present in reference to municipal water and electric plants.

Southport—Fish-product Factory, etc.—The Atlantic Construction Co., recently reported, is erecting an extensive oil and fish-scrap manufactory at Fort Anderson; already have erected warehouse, tanking-house, machinery building, boiler and engine room, storehouse, mess hall, seine and boat house, carpenter shop, blacksmith shop, etc. Plant will be operated by two engines of fifty horse-power each and two boilers of 100 horse-power each. Capacity is 350 tons of fish per day. Capt. J. F. Bussells is general manager.

South Washington—Saw-mill, Brick Works, etc.—D. J. McMillan & Co. intend to build saw-mills, cotton gin, and probably brick works; latter will be for pressed ornamental brick, 30,000 daily. A company with \$125,000 capital in stock and bonds will be organized to own and operate the plants.*

Washington—Saw-mills.—The Wm. Shuett has succeeded the Alleghany Company and added about \$5000 worth of new machinery to the plant. Wm. Shuett of Saginaw, Mich., is in control.

Wilmington—Ice Factory.—The Carolina Ice Co. will rebuild its ice factory destroyed by fire this week.

Wilmington—Grain Bin.—Boney & Harper have awarded contract to John H. Hanby for the erection of a grain bin of 14,000 bushels capacity.

Winston—Medicine Company.—The Sampson Medicine Co. has been organized, with capital stock of \$5000, by W. Lee Harger, R. H. Rodenhamer, H. O. Sapp and M. F. Masten.

Winston—Water-power Development.—The People's Manufacturing Co. has been incorporated, with capital stock of \$50,000, and privilege of increasing to \$1,000,000, to develop and transmit water-power and to build manufacturing enterprises. George H. Bailey of New York city, G. E. Webb, J. O. Magruder and D. N. Dalton are the incorporators.

SOUTH CAROLINA.

Charleston—Fertilizer Factory.—The Charleston Mining & Manufacturing Co. will issue \$1,000,000 of bonds to build a factory for the manufacture of phosphate rock into commercial fertilizers; plans for the building have been prepared.

Charleston—Mercantile.—W. T. Weekly and John B. White have incorporated the W. T. Weekly Co., with a capital of \$2500.

Fort Mill—Brick Works.—The Charlotte Brick Co. is establishing brick works of 10,000,000 annual capacity. S. S. McNich, E. B. Springs, T. B. Gantler, B. D. Springs and others are interested, all of Charlotte, N. C.

Fort Mill—Cotton Mill.—Harvey White of Graham, N. C., is endeavoring to ensure the organization of the cotton-mill company previously noted as proposed.

Oakley Depot—Saw and Lumber Mills.—J. Ross Hanahan of Charleston and Nathaniel Hayward have incorporated the Mepshew Lumber Mill Co., with capital stock of \$6000, for operating saw and lumber mills.

Pelzer—Mattress, etc., Factory.—Negotiations are in progress for the establishment of a spring-bed plant, mattress and broom factory and excelsior plant. Address James S. Brown.*

Union—Sewerage.—Geo. O. Tenney of Spartanburg, S. C., has contract at \$21,000 for constructing the sewerage system at Union.

TENNESSEE.

Athens—Telephone-pin Factory.—Efforts are being made for the establishment of a factory for the manufacture of telephone pins. Address Mayor W. W. Grant.

Bristol—Lumber Mill.—The Strong Lumber Co. of Philadelphia, Pa., is reported to remove a lumber mill from Buffalo, N. Y., to Bristol; capacity 80,000 feet per day.

Campbellsville—Saw-mill.—Thomas Craig has established a saw-mill.

Chattanooga—Vehicle Factory.—E. E. Sweeney of the Nashville (Tenn.) Buggy Co. will, it is reported, organize a \$25,000 stock company for the establishment of a vehicle factory, probably in Chattanooga.

Chattanooga—Electrical-supply Works.—The D. M. Steward Manufacturing Co. states that it is not installing any new machinery, as has been reported.

Chattanooga—Iron Works.—The Cahill Iron Works will enlarge building and increase capacity of its works.

Chattanooga—Saddlery.—Chartered: The Globe Saddlery Co. (established), by Fred W. Wallace, Bowdrie Brown, W. B. Garvin and others, with capital of \$15,000.

Covington—Cotton Mill.—The Tipton Cotton Mill Co. intends to increase to 6000 spindles; now has 3500.

Crossville—Stave Mill.—The Standard Oil Co. has purchased from Burnett, Kearley & Martin the oak timber on 4000 acres of land at Crossville and will establish a mill for manufacturing oil-barrel staves.

Crossville—Coal Mines.—The Citizens' Co-operative Coal Land Co. will, it is rumored, organize a company for the development of coal deposits that underlay 4000 acres of land.

Ducktown—Mining Improvements.—The Tennessee Copper Co. is making extensive improvements at Ducktown and Copperhill, including new shaft-houses, numerous sheds and other buildings.

Fayetteville—Stave Factory.—S. H. Allen of Petersburg, Tenn., will establish a factory for manufacturing slack-barrel staves and headings.

Gorman—Stave Factory.—Howard & Harris are installing large stave factory.

Gorman—Stave Factory.—Ridings & Turner will establish a stave factory.

Jackson—Ice Plant.—Gilbert D. Raine of Memphis, Tenn., who recently purchased the plant of the Tennessee Ice Co., has, with C. G. Bond, O. J. Nance, Dr. Ambrose McCoy and Landon H. Stockton, organized the Jackson Ice Co., with capital stock of \$20,000, to enlarge, improve and operate the plant.

Knoxville—Knitting Mill.—J. Wiley Brownlee, lately reported to establish a knitting mill, has, with others, organized the Cumberland Knitting Mills and secured building, which will be equipped with machines. J. Wiley Brownlee will be president; T. J. Whittaker, vice-president, and Dick Boyd, secretary and treasurer.

Knoxville—Manufacturing.—J. C. Stechl is in correspondence with a company that will locate a \$25,000 manufacturing plant in Knoxville.

McCall—Flour Mill.—D. D. Dugger may be addressed regarding the flour mill reported last week.

Mt. Pleasant—Sewerage, Water-works, etc.—The legislature has been petitioned for authority to issue \$25,000 of bonds for construction of sewerage system and \$25,000 for water-works and street improvements. Address "The Mayor."

Mt. Pleasant—Water-works, Sewers, etc.—The city is obtaining from the legislature privilege to secure \$50,000 of bonds for the construction of water-works system, for laying sewers and for street improvements. J. M. Hunter, mayor, can be addressed.

Murfreesboro—Electric-light Plant.—The Murfreesboro Electric Light Co. has purchased new dynamo and other machinery to improve its lighting facilities.

Nashville—Lumber Mills.—W. B. Earhman & Co. will rebuild their \$90,000 lumber mills, reported burned.

Pikeville—Timber Lands, etc.—A. H. Brees of Mt. Gilead, Ohio, representing Richmond (Ind.) capitalists, has purchased 5300 acres of timber lands in Bledsoe county, will clear the timber from the property and convert it into lumber.

Rotherwood—Woolen Mill.—C. N. Jordan will install new machinery in and improve his woolen mill.

Somerville—Electric-light Plant and Water-works.—The city will issue bonds for erection of electric plant and construction of water-works. Address "The Mayor."

Tennessee—Iron Mines.—J. C. Ends of Macon, Ga., will develop iron mines in East Tennessee.

Tullahoma—Electric-light Plant and Water-works.—The establishment of electric-light plant and water-works is contemplated. Address "The Mayor."

Winchester—Electric-light and Water Works.—The city is investigating the cost of constructing electric-light and water plants. M. T. McDowell has submitted a proposition to establish the plants, the city

having the right to purchase after a certain time. H. D. Brannan is mayor.

TEXAS.

Abilene—Flour Mill and Elevator.—The Abilene Milling Co., reported lately as chartered, has purchased and will operate Hunt Bros.' 100-barrel flour mill and 25,000-bushel grain elevator. B. R. Moffett is manager.

Abilene—Mercantile.—W. K. Early and others have incorporated the West Texas Mercantile Co., with a capital stock of \$10,000.

Austin—Cottonseed Delintery.—It is stated that a \$30,000 company is being organized to erect a plant for hulling and delinting cottonseed.

Austin—Refrigerating Plant.—Armour & Co. of Chicago are reported as to erect a large refrigerating plant at Austin.

Beaumont—Oil Pipe Line.—Chartered: The New York Oil & Pipe Line Co., capital \$100,000, by J. F. Lanier, L. J. Kopk and Gordon Bullett, to store and transport oil, gas, etc.

Beaumont—Water-works System.—T. W. Shepherd, I. D. Polk, W. H. Pope, D. Call and others have organized a company and been granted franchise for construction of a system of water-works.

Brenham—Oil Lands.—Dr. W. C. Baird of Hallettsville, Texas, will organize a \$500,000 stock company to prospect for oil near Brenham.

Cookeville—Broom Factory.—Denny Bros. & Ditty have established a broom factory.

Corsicana—Soap Factory.—Capt. J. E. Labatte of Fort Worth proposes the establishment of a \$20,000 soap factory in Corsicana.

Cuero—Soap Factory.—The Cuero Soap Factory has been established, with C. F. Muller, manager.

Dallas—Flour Mill.—The New Century Milling Co., composed of McKinney (Texas) parties, will erect a flour mill in Dallas.

Ennis—Water-works.—The Ennis Water-Works, lately reported incorporated, will purchase an established plant.

Fort Worth—Lumber Company.—Chartered: The Wichita Valley Lumber Co., capital \$20,000, by T. R. Grigsby, R. F. Brown, Henry Frey, T. H. Brents and J. A. Rose of Chickasaw, I. T.; J. G. Brown and W. A. Benton of Fort Worth.

Galveston—Creosoting Plant.—The International Creosoting & Construction Co. has increased its capital stock from \$50,000 to \$100,000.

Grand Saline—Mercantile.—The T. B. Meeks Co. has been incorporated, with capital stock of \$30,000, by T. B. Meeks and others.

Greenville—Railway-tie Yards.—It is reported that the Missouri, Kansas & Texas Railway Co. will establish tie yards and creosoting plant at Greenville at a cost of \$50,000; A. A. Allen, manager, Dallas.

Greenville—Coal Mines.—Y. O. McAdams, O. S. Moore and A. S. Moore have incorporated the Texas Oil & Coal Co. for the development of coal mines in Rains county; capital stock \$30,000.

Greenville—Square-bale Compress.—J. B. Dale, Jr., T. J. Phillips and others will organize a company to erect a square-bale ginning and compressing plant. Ten gins will be installed.

Hico—Mercantile.—Incorporated, with \$25,000 capital, the Utterback-Harris-Kendrick Company, by B. M. Utterback and others.

Hillsboro—Mercantile.—Incorporated: The Hillsboro Dry Goods Co., capital \$20,000, by P. H. Pennington and others.

Houston—Oil and Gas Pipe Line.—James Irvine, B. F. Bonner, M. W. Meyer, W. W. Wilson and others have received franchise for constructing an oil and gas pipe line.

Houston—Vehicle, etc., Works.—The Mosehart & Keller Company, reported lately, is the incorporation of Mosehart & Keller, manufacturers of and dealers in carriages, wagons, harness, etc. H. G. Mosehart is president; P. D. Keller, vice-president, and H. D. Schleuter, secretary.

Manchester—Furniture Factory.—The Manchester Furniture Co. has been organized, with C. C. Chapman, general manager, for the establishment of a furniture factory.

Mineral Wells—Oil Mill.—A proposition has been made for the establishment of an oil mill. Names of interested parties will be announced later.

New Boston—Oil Mill.—J. B. Lassiter, L. C. Styles and D. W. Cheatham of Clarksville, T. A. Fuller and W. L. Tapp of New Boston have formed the Bowie County Oil Co., with capital stock of \$50,000, for the establishment of a cottonseed-oil mill.

Orange—Electric Light Plant.—The Orange Electric Light & Ice Co. will replace its en-

tire present equipment with new and improved machinery.

Paris—Clothing.—Chartered: The Dickerson Clothing Co., capital \$10,000, by W. H. Dickerson and others.

Port Arthur—Oil Wells.—Peter Lamp, C. M. Davis, James Furlong, S. McDaniels and others have incorporated the Port Arthur Oil Co. to prospect for oil, water, gas, coal and other minerals; capital stock \$10,000.

Savoy—Flour Mill.—The Savoy Milling Co. has been organized, with T. J. Patilla, president, and E. McMahon, secretary-treasurer, and capital stock of \$10,000. Machinery has been purchased for a 100-barrel flour mill.

Sherwood—Irrigation.—The Irion Irrigation & Cattle Co., capital \$4000, has been incorporated by Geo. E. Weyl of Sherwood, C. S. Weyl, F. W. Roberts, J. M. Ostrander and H. V. Brandenburg of New York.

Stamford—Mercantile.—Chartered: The Baker-Bryan Company, capital \$50,000, by Geo. H. Baker and others.

Temple—Flour Mill.—A flour mill with capacity of 200 barrels per day will be established. Address "Proprietor of Werkheiser Elevator."

Walnut Springs—Gin.—The Walnut Springs Gin Co. will install two 70-saw gins, double-belt press and new elevator to increase capacity; present equipment is three 70-saw gins.

Weatherford—Water-works.—The city contemplates constructing water-works, to include standpipe several miles of mains, reservoir, dam and pumping machinery. Address "The Mayor."

Wichita Falls—Telephone Company.—The Wichita & Charlin Telephone Co. has been incorporated, with capital of \$1500, by W. D. Bently, D. E. Bently, H. T. Dunn and others.

VIRGINIA.

Charlottesville—Cannery and Ice Factory.—The Charlottesville Ice Co., lately mentioned, will build an ice and cold-storage plant of fifteen tons ice-making and ten tons refrigerating capacity; company expects later to add a cannery.

Claremont—Steamboat Company.—A company is being formed to operate steamboats. Capt. James Cline is interested.

Danville—Lumber Manufacturing, etc.—The R. I. Anderson Co. has been incorporated, with a capital stock of \$50,000, to manufacture lumber, sash, etc., and deal in fuel, etc. R. I. Anderson of Elba is president, and T. B. Fitzgerald, vice-president.

Fairfax C. H.—Electric Plant.—The Southern Incandescent Lighting Co. of Virginia has been chartered, with R. C. L. Moncure, president, and James P. Machen, Jr., secretary and treasurer; capital stock \$5000.*

Hampton—Electric Light Plant.—A committee will be appointed to investigate the advisability of erecting an electric-light plant. Address Mayor Hope.

Lynchburg—Iron Foundry.—The Glamorgan Pipe & Foundry Co. has instructed its president to make such improvements to the plant and machinery as necessity demands.

Lynchburg—Manganese Plant.—The National Paint & Manganese Co., Limited, of Pittsburgh, Pa., states that it is considering the removal of its works to Lynchburg, as was lately mentioned. No definite location has been decided upon. New buildings will be erected and some new and additional machinery installed.

Newport News—Ice Factory.—The Consumers' Light, Heat & Ice Co. will erect an additional ice plant of possibly fifty tons capacity. Plans have been prepared.

Newport News—Artesian-water Company. T. B. Henley, W. B. Vest, W. W. Woodward and others have incorporated the Virginia Artesian Water Co., with capital stock of \$300,000, and applied for franchise to use the streets of Newport News.

Norfolk—Land Company.—The South Ghent Land Co. has been incorporated, with capital stock of \$50,000, for development of suburban property; I. Q. Collins, president; W. C. Cobb, vice-president, and H. L. Page, secretary-treasurer.

Norfolk—Improvement.—The Ocean View Amusement Co. has been incorporated, with capital stock of \$5000 to \$25,000, for improvements at Ocean View. F. H. Sawyer is president; George S. Crane of Philadelphia, Pa., vice-president, and George E. Ford, secretary and treasurer.

Petersburg—Mercantile.—Chartered: The Rucker Dry Goods Co., capital \$10,000; Wallace M. Rucker, president.

Portsmouth—Knitting Mills.—The National Trust Co. of Washington, D. C., will establish a large knitting mill at Portsmouth; local representative is Mr. Whaley, office in the Kira Building.

Richmond—Land Improvement.—The Lewis Ginter Land & Improvement Co. has been chartered, with capital stock of not less than \$400,000, nor more than \$800,000, for the development and improvement of real estate, erection of hotels, etc., by George Arents, Thomas F. Jeffress, Minnie E. Young and Grace E. Arents.

Sterling—Grain Elevator.—H. B. Hutchison & Co. will rebuild their elevator; capacity to be 4000 bushels.

Stuarts Draft—Manganese and Iron Mines. The Imperial Manganese & Iron Co. has been incorporated, with capital stock of \$1,000,000, for the development of mines near Stuarts Draft. Jos. W. Rinehart of Plainfield, N. J., is president; James Gwatkin of New York city is vice-president, and Henry F. Fay of Brooklyn, N. Y., secretary and treasurer.

WEST VIRGINIA.

Bellaire—Coal Mine.—The Pultney Coal Co. is proceeding with its pumping out of the old coal mine near Bellaire, and will commence shipping this month.

Bridgeport—Pumping Station.—A committee has been appointed to consider the construction of a pumping station. Address "The Mayor."

Spring Hill—Coal-land Developments.—A dispatch from Cincinnati claims that G. G. Hadney and D. A. Nease of New York are negotiating for 200,000 acres of coal lands, intending to develop the property by the construction of railways, installation of mining plant, etc., and ship largely for export trade. It is also claimed that John W. Gates of the American Steel & Wire Co., New York, is a party to the negotiations, but no definite particulars are available.

BURNED.

Brownhillsville, Md.—W. T. Turner's flour mill, valued at \$8000.

Charleston, W. Va.—The Charleston Boiler Works.

Fair Hill, Md.—Providence Paper Mills damaged \$5000; owned by Kenmore Pulp & Paper Co.

Friedens, Va.—J. H. Monger's stave factory.

Henderson, Ky.—Henderson Tobacco Extract Co.'s plant damaged to extent of \$18,000.

Nashville, Tenn.—W. B. Earthman & Co.'s lumber plant; estimated loss \$90,000.

Savannah, Ga.—Seaboard Air Line's machine shop and roundhouse; estimated loss \$40,000; John Skelton Williams, president, Richmond, Va.

BUILDING NOTES.

Adairsville, Ga.—School Building.—W. M. King, chairman committee Cherokee Baptist High School, will receive bids until March 11 for grading, foundations, brick and carpenter work of two-story press-brick school building 50x60 feet. Plans and specifications at office of Dr. Joe P. Bowdoin.

Alexandria, La.—Warehouses.—William Polk has awarded contract to Hoffman & Wilson to build a brick warehouse 60x150 feet to cost \$7500. Mr. Polk will erect two more warehouses of same size.

Alexandria, La.—Bank Building.—J. Riley Gordon Company, A. A. Armstrong, associate architect, Shreveport, La., will open bids February 20 for erection and completion of bank building for the First National Bank of Alexandria. Plans and specifications may be seen at Builders' Exchange, Shreveport; First National Bank, Alexandria, and Mechanics, Dealers and Lumbermen's Exchange, New Orleans. Certified check for \$500 must accompany each bid; usual rights reserved and bond required.

Anniston, Ala.—Buildings.—S. C. Houser & Wolsoncroft have received contract for storage plant for the Central Foundry Co. and an amusement hall and a two-story office building for the Woodstock Cotton Mills.

Atlanta, Ga.—Engine-house.—Plans have been drawn for erection of a two-story brick engine-house to cost \$6000. Address "Fire Chief" Joyner.

Augusta, Ga.—Armory.—The city has had plans made by L. F. Goodrich for erection of a two-story armory to cost not more than \$15,000.

Augusta, Ga.—Armory.—Bids will be opened February 16 for the erection of the armory to be owned by the city, after plans by L. F. Goodrich; \$15,000 is the appropriation.

Baltimore, Md.—Hotel.—Douglas H. Thomas, Jr., and J. Harleston Parker have completed plans for the proposed 12-story hotel to be erected at Charles and Chase streets; will be of steel frame, fireproof and

arch construction. Those interested are Nelson Perin, Wm. P. Harvey, Alexander Brown and others.

Baltimore, Md.—Baldwin & Pennington have prepared plans for a \$7000 cottage to be erected at Roland Park by Walter Ancker.

Baltimore, Md.—Church.—Bids are being submitted for the proposed Catholic church, to cost \$50,000, at Elkridge Landing, to be erected by C. D. Kenny. Baldwin & Pennington are the architects.

Beaumont, Texas.—Office Building.—V. Weiss has had plans made by McAdd & Phelps of San Antonio for erection of the five-story office building lately reported. Building will be 55x110 feet, and have elevator, steam heat, plumbing and wiring for lights and telephone, etc. Bids are wanted, bidders to furnish all materials and labor.

Birmingham, Ala.—Bank Building.—The announcement that the First National Bank would erect a new building is premature; nothing as yet has been decided.

Bishopville, S. C.—City Building.—The city will erect a brick building. Address "The Mayor."

Chattanooga, Tenn.—Warehouse.—The Loomis & Hart Manufacturing Co. has awarded contract to W. R. Stivers for erection of a brick warehouse.

Columbia, S. C.—Office Building.—E. W. Robertson and his associates have determined definitely to erect the proposed 10-story office building; however, contracts will not be awarded until next winter; building will be constructed of steel, frame, marble, pressed brick, fireproof materials, with 230 offices and banking facilities.

Crowley, La.—School.—Plans by W. L. Stevens of Baton Rouge have been accepted for the proposed school building to cost not more than \$24,000.

Dublin, Ga.—School Building.—The city will probably erect new school building. Address "The Mayor."

Earlington, Ky.—Office Building.—The Bee will erect an office building.

Earlington, Ky.—Bank.—The Kentucky Bank & Trust Co. of Madisonville will erect a bank building in Earlington.

Fitzgerald, Ga.—Depot.—Bennett & Dickerson have contract for building the Wagon Air Line's freight depot.

Jackson, Ga.—Cottages.—Pepperton Cotton Mills will build sixty cottages for operatives.

Jackson, Miss.—College.—Plans by H. H. Bryam of Memphis, Tenn., have been accepted for the proposed \$15,000 dormitory for the Alcorn Agricultural and Mechanical College.

Kansas City, Mo.—Business Building.—George L. Brown & Co. have received contract for the superstructure of the eight-story building to be erected by Burnham, Hanna, Munger & Co. Contract does not include foundation, electric plant, elevators, steam and gas equipment. Building complete will cost \$300,000.

Knoxville, Tenn.—Depot.—The Southern Railway Co.'s proposed depot at Knoxville will cost from \$60,000 to \$70,000, nearly twice as much as at first contemplated. Frank P. Milburn of Columbia, S. C., will prepare plans.

Lexington, Ky.—Business Building.—The Security Trust & Safety Vault Co., as trustee, has had plans made by H. C. Rowe for erection of a three-story brick building.

Louisville, Ky.—Store and Office Building.—T. B. Hutchings has made plans for five-story brick store and office building for Prince Wells.

McKinney, Texas.—Church.—T. C. Goodner will receive proposals until February 21 for erection of a brick veneer church building for the First M. E. Church, South. Plans and specifications are at office of Flanders & Skielvig, architects, Dallas, and at Collin County National Bank, McKinney. Usual rights reserved.

Natchez, Miss.—School.—The city has authorized the asking for bids on the erection of a school building. Address "The Mayor."

New Albany, Miss.—School.—The city will build a schoolhouse to cost not more than \$10,000. Address "The Mayor."

New Orleans, La.—School.—Thomas Sully has completed plans for the Frank T. Howard School, which will be a two-story brick building 77x123 feet, with tiled roof, etc.

Ozark, Ala.—Church.—The Baptist Church will erect a new edifice to cost \$5000 or more. W. L. Casey, chairman, can be addressed.

Pensacola, Fla.—Business Building.—Willis & Broughton have contract for foundation of the four-story building to be erected by Mr. Thiesen.

Petersburg, Va.—Warehouse.—Capt. T. F. Heath is interested in the organization of a stock company for erection of warehouse.

Roanoke, Va.—College Building.—H. H. Huggins will have plans completed for Virginia College (recently burned) about February 15, and will receive bids on building and on plumbing and steam-fitting specialties until March 1. Building will be three stories, 42x230 feet, with two wings 42x100 feet, of brick, with slate roof, steam heat, electric lighting, etc.; Miss Mattie P. Harris, president Virginia College, Buena Vista, Va.

Roanoke, Va.—Association Building.—The Y. M. C. A. will erect a \$25,000 hall; W. S. McClanahan, president.

Savannah, Ga.—Quarantine Buildings.—J. K. Taylor, supervising architect, Washington, D. C., will receive proposals until March 11 for construction of building at United States quarantine station, Savannah, in accordance with drawings and specifications, copies of which may be had at Taylor's office or office of medical officer in command at the station. Proposals will also be received until March 9 for construction of buildings for accommodation of crews and for miscellaneous repairs at the South Atlantic quarantine station, Blackbeard Island, Ga.

Shelby, N. C.—Business Block.—A. C. Miller will rebuild the Miller block, lately burned.

Statesboro, Ga.—Hotel.—J. W. Olliff will erect a brick hotel to cost \$30,000.

St. Louis, Mo.—Hotel.—John Esser will erect a four-story brick hotel to have hot-water heating apparatus, electric elevators, etc., and cost \$81,000.

Tiptonville, Tenn.—Business Block.—The Tiptonville Hardware Co. has let contract for erection of a business block.

Washington, D. C.—Apartment-house.—Lester A. Barr has purchased site for \$25,000 and will erect a seven-story apartment-house.

Washington, N. C.—Church.—Baptist congregation will erect a \$5000 church building; J. H. Rich, pastor.

Wilmington, N. C.—Hotel.—F. A. Applegate has contract to erect the \$8000 annex to Wrightsville Beach Hotel.

Woodsboro, Md.—Bank Building.—The Woodsboro Savings Bank will receive bids until March 19 for the erection of a building sixty-seven feet front, three stories high, containing bank room, two storerooms, town hall and offices. Specifications can be seen after February 20.

RAILROAD CONSTRUCTION.

Railways.

Amarillo, Texas.—The Choctaw, Oklahoma & Gulf Railroad Co. has awarded the contract for constructing a portion of its extension between Weatherford, Oklahoma and Amarillo to Johnston Bros. & Faught of St. Elmo, Ill. The contract covers eighty-four miles, and represents an outlay of \$1,500,000. F. A. Molitor at Little Rock, Ark., is chief engineer.

Asheville, N. C.—The Asheville & Craggy Mountain Railroad Co. will extend its electric line about 4000 feet to a park located in the suburbs of Asheville. R. H. Tingley, 75 Westminster street, Providence, R. I., is chief engineer. R. S. Howland, also of Providence, is president.

Batesville, Ark.—The White River Railway Co. has been incorporated in Arkansas, with \$1,950,000 capital stock, to build from a point near Batesville in a northwesterly direction to the line between Arkansas and Missouri. The promoters include George J. Gould, president of the Missouri Pacific system, and a number of other officials of this line, among them Russell Harding of St. Louis, vice-president. The estimated length of the line is 130 miles.

Beaumont, Texas.—Among those interested in the Beaumont Northern Railway Co., recently incorporated, are W. A. Fletcher and E. A. Fletcher of Beaumont. The estimated length will be thirty-five miles, extending to a point in Jasper county.

Clements, Ala.—H. F. De Bardeleben of Birmingham, Ala., is reported as interested in a company which will build a short railroad in Tuscaloosa county to connect with the Mobile & Ohio near Clements.

Cleveland, Texas.—Ricker & Lee, contractors for the extension of the Gulf, Colorado & Santa Fe Railroad, may be addressed at Cleveland. They are soliciting bids for sub-contracts.

Coleman, Texas.—It is stated that J. F. McDonald & Son of Rockwood, Texas, have secured the contract to grade ten miles of the Vining & Coleman Railroad. John Andrewartha at Austin is engineer.

Columbus, Miss.—The Board of Trade of Columbus is interested in securing an extension of the Kansas City, Memphis & Bir-

mingham Railroad from Aberdeen to Columbus, a distance of twenty-five miles, and a committee has been appointed to agitate the matter. T. B. Franklin is one of the committee.

Denison, Texas.—It is reported that the St. Louis & San Francisco Railroad Co. has decided to build a further extension of its line, now under construction between Sapulpa, I. T., and Denison, and that several branches will be constructed. B. F. Yoakum at St. Louis, Mo., is general manager of the company.

Dublin, Ga.—It is reported that the scheme to build a railroad between Dublin and Madison has been revived, and that the Seaboard Air Line may become interested in it. Millard George of Madison, it is understood, is one of the promoters.

El Paso, Texas.—Messrs. George S. Good & Co., general contractors for the El Paso & Rock Island Railroad, inform the Manufacturers' Record that they will sublet all of the grading, but construct the bridges and lay the rails, the company furnishing the steel. It is calculated to complete this line, which will be 130 miles in length, during the present year. It will connect the El Paso & Northeastern with the Chicago, Rock Island & Texas.

Eureka Springs, Ark.—John Scullin of St. Louis, one of the promoters of the St. Louis & North Arkansas Railroad, writes that about nineteen miles are now in operation between Seligman and Eureka Springs. The section between Eureka Springs and Harrison will be in operation about April 1. It is fifty miles long, and forms a part of a total extension from Eureka Springs of 110 miles.

Fort Worth, Texas.—The Red River, Texas & Southern Railway Co. has filed a charter to build from Fort Worth to Willis, Texas, a distance of 210 miles. Among those interested are J. D. Francis of St. Louis and John Sonnenfeld of Dallas, Texas.

Fort Worth, Texas.—Hon. B. B. Paddock, who is interested in the construction of a railroad from Fort Worth in a northwestern direction, writes the Manufacturers' Record that a company has been formed and surveys made in the interest of this enterprise.

Gainesville, Ga.—It is reported that arrangements are being made to build a railroad line between Gainesville and Union Point by the way of Sparta and Davisboro. The estimated distance is seventy-five miles.

Heartpine, Ga.—It is expected that the extension of the South Georgia Railroad between Heartpine and Greenville, Fla., will be completed by May 1. The extension now under construction is about twenty-four miles in length. Rails have been manufactured for it by the Maryland Steel Co. of Sparrow's Point.

Jefferson City, Mo.—It is reported that the Missouri Pacific Company is considering the construction of a line along the Missouri river between Jefferson City and Boonville. The estimated distance is forty miles. Russell Harding at St. Louis is vice-president of the company.

Jonesboro, Ark.—The Jonesboro, Lake City & Eastern Railroad Co. has secured an amendment to its charter, allowing it to build an extension between Manila and Blythesville, in Wise county. The extension will be twenty miles in length. A. J. Kerfoot at Jonesboro is general manager of the company.

Marion, N. C.—A bill has been passed in the legislature incorporating the Marion & Northwestern Railway Co.

Memphis, Tenn.—The improvements contemplated along the Kansas City, Fort Scott & Memphis system and branches include forty-three miles of 75-pound rail to be placed between Hoxie, Ark., and Memphis, also about seventy miles of 75-pound rails on others portions of the line. D. Bontecou of Kansas City is chief engineer of the company.

Milan, Tenn.—It is reported that surveys are now in progress for a railroad between Milan and Columbia, 100 miles, in the interest of the Illinois Central system. David Sloan at Chicago is chief engineer of the Central.

Mobile, Ala.—The plan to build the Mobile & West Alabama Railroad has been revived by the Chamber of Commerce of Mobile, and it is stated that H. Austill, who is the principal promoter, has interested a number of New York parties in the enterprise.

Mobile, Ala.—It is stated that the Illinois Central Railroad Co. has secured control of the Mobile, Jackson & Kansas City Railroad, in operation between Mobile and Merrill, Miss., and that it will be extended from Merrill to Jackson, a distance of 110 miles. David Sloan at Chicago is chief engineer of the Central.

Morgantown, W. Va.—It is stated that the Morgantown & Kingwood Railroad Co. has decided to complete the line between the towns mentioned. About nine miles have been constructed near Morgantown. John Martin is vice-president of the company.

Nashville, Tenn.—A charter has been granted to the Tennessee Central Railway Co. to build between Nashville and Lebanon. The incorporators include H. M. Hood and W. A. Beatty. (It is understood that this is a separate corporation from the one of which Jere Baxter is president.)

New Market, Va.—The business men of New Market are agitating the question of building a railroad between Strasburg and Harrisonburg, Va., to connect with the Baltimore & Ohio.

Newport News, Va.—The Hampton Roads Railway Co., it is reported, is to begin work immediately upon its line between Newport News and Old Point, passing through Hampton, Va.

Norfolk, Va.—The Manufacturers' Record is informed that Isaac A. Walker & Son, general contractors of the Chesapeake Transit Co., will probably begin work immediately, as the line is to be ready for operation by July 1. It is to be a steam railroad between Norfolk and Cape Henry. The address of Messrs. Walker & Son is Girard Building, Philadelphia, Pa.

Perry, Fla.—The West Coast Railway Co. has been organized to build a line between Perry and Greenville. It is reported that grading has already begun.

Queenstown, Md.—The Queen Anne's Railroad Co. has let a contract to Wade, Sloan & Co. of Baltimore for its extensions from Queenstown to Love Point, also to Centerville. The extensions will be about twenty miles in length. W. H. Bosley of Baltimore is president of the company.

Sistersville, W. Va.—H. W. McCoy of Sistersville, one of the directors of the Tyler Railroad Co., writes the Manufacturers' Record that it is proposed to build an electric line between Sistersville and West Union, a distance of twenty-five miles. The first section of the road will be constructed between Sistersville and Middlebourne.

Waco, Texas.—Arrangements are being made to extend the Calvert, Waco & Brazos Valley Railroad to Waco. The road will form a portion of the International & Great Northern system. Leroy Trice at Palestine is vice-president of the company.

West Point, Va.—The West Point, Urbanna & Yorktown Railroad will be about fifteen miles in length, extending between West Point and Urbanna. Thomas B. Henley of Norfolk is one of the promoters of the enterprise.

West Point, Va.—A bill is pending in the Virginia legislature to incorporate the West Point, Urbanna & Yorktown Railway Co. to build between the towns mentioned. Among those interested are T. B. Henley of Newport News and J. C. Robinson of Hampton, Va. The company is capitalized at \$300,000.

Winston, N. C.—Pennsylvania parties, it is reported, are interested in the plan to build an electric railroad between Winston and a point in the suburbs.

Wise, Va.—The railroad proposed from Wise along Indian Creek valley is now being surveyed. It will be built in the interest of the Virginia Coke & Steam Coal Co., of which N. B. Dotson of Wise is president.

Street Railways.

Baltimore, Md.—The United Railways & Electric Co. has decided to construct a branch at West Arlington, in the suburbs. W. A. House at Baltimore is general manager of the company.

Birmingham, Ala.—Robert Jemison, vice-president of the Birmingham Railway & Electric Co., informs the Manufacturers' Record that the improvements contemplated by this company include the substitution of electric for steam power on about thirty miles of its road. The rails on this section will be replaced by steel weighing from forty to sixty pounds to the yard.

Durham, N. C.—It is stated that the Durham Traction Co. has decided to begin construction work upon its electric line in the city immediately. R. H. Wright is president.

Pine Bluff, Ark.—W. H. Langford is interested in another company to build an electric line in Pine Bluff and suburbs.

Savannah, Ga.—It is reported that the Savannah Street Railway Co. is considering the building of an electric line to Montgomery, in the suburbs. L. H. McIntire is general manager of the company.

Tuscaloosa, Ala.—It is reported that a number of improvements will be made to the Tuscaloosa Belt Railway Co., and that electric motors will be utilized in place of the

present system. Robert Ober of Baltimore is the principal owner of the line.

Vicksburg, Miss.—C. H. Randle of Chicago is one of the capitalists interested in the proposed street railway, and it is stated will purchase an issue of \$300,000 in bonds to be offered by the company.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Machinery.—Francis Henry Purnell, Snow Hill, Md., wants to correspond with makers of improved agricultural machinery.

Air Compressors.—See "Ironworking Machinery."

Bank Fixtures.—Sam R. Guyther, Patterson, La., will correspond with parties relative to purchasing vault, safe and other fixtures for bank.

Belt Wheel.—R. W. Pratt, 111 Haverhill street, Boston, Mass., wants a belt wheel of sixteen feet diameter, 30-inch or more face, 17-inch bore and twenty tons weight.

Boiler and Engine.—See "Mattress, etc., Machinery."

Boiler and Engine.—D. C. Harrell & Co., Suffolk, Va., are in the market for a new 30-horse-power engine and 35 or 40-horse-power boiler.

Boiler and Engine.—Arlington Oil & Fertilizer Co., Arlington, Ga., will be in the market in April for a 60-horse-power Corliss engine, second-hand, and a new 75-horse-power boiler.

Boiler and Engine.—See "Brick Works."

Boilers and Engine.—Taylor Cotton Oil Works, Taylor, Texas, wants prices on new engine and three new boilers.

Boiler Specialties.—H. V. S. Negus, Greenville, Miss., wants addresses of concerns manufacturing shaking or dumping grates (Southern preferred).

Bottling Works.—Wm. C. C. Vanneman, Box 501, Clifton Forge, Va., wants addresses of firms manufacturing outfits for bottling pops, ginger ale, etc.

Boxes.—J. Thos. McLean Co., Lincolnton, N. C., wants to buy empty axle-grease boxes.

Brick Machinery.—John F. Grandy, Greenville, S. C., wants clay crusher, half-dozen spring brick trucks, half-dozen clay dump cars, corrugated sheet iron, etc.

Brick Works.—D. C. McMillan & Co., South Washington, N. C., want estimates on complete plant for manufacturing 30,000 pressed ornamental brick daily; also on cotton gin, press and boiler and engine for same, and on saw-mill machinery and outfits.

Bridges.—E. H. Vasmer, county judge, Houston, Texas, will receive bids until February 14 for construction of a pile-wood trestle bridge in accordance with plans on file with county surveyor. Bids accompanied by check for \$50; usual rights reserved and \$250 bond required. Judge Vasmer will also receive bids until February 14 for construction of steel bridge over White Oak bayou in accordance with plans and specifications on file with county surveyor. Bids accompanied by check for \$150; usual rights reserved and \$2000 bond required.

Calculating Plant.—George Miller, 699 South Broadway, Baltimore, Md., wants estimates on kilns for calculating flint.

Clothing Machinery.—West Point Iron Works, West Point, Ga., want prices, catalogues, etc., on machinery for making overalls, suits and jeans pants.

Cornmeal Machinery.—E. M. O'Neal, Riceboro, Ga., wants machinery for separating and cleaning corn mash and turning out table meal and grit at one action; second-hand considered.

Cotton Gin.—See "Brick Works."

Cotton Gin.—Arlington Oil & Fertilizer Co., Arlington, Ga., will be in the market in April for a four 50-gin stand outfit complete.

Dredge.—Illinois Canal & Rice Co., Jennings, La., is in the market for a steam dredge.

Dredging Machinery.—See "Mining Machinery."

Dry-kiln.—See "Woodworking Machinery." **Electrical Supplies.**—The Southern Incandescent Lighting Co., J. P. Machen, Jr., secretary, Fairfax, Va., wants to correspond with manufacturers of incandescent lamps.

Electric-light Plant.—C. Y. Byrd, Live Oak, Fla., wants bids on two 100-horse-power boilers, 14x42, with 14-foot by 20-inch face wheel (Corliss) engine, shafting, belting, two 750-light incandescent alternating generators, wire, lamps, etc.

Elevator.—Napoleon Pulp Plaster Co., Napoleon, Ohio, wants a good second-hand platform elevator to lift ton of material and man by steam.

Engine.—Francis Henry Purnell, Snow Hill, Md., wants to buy 10-horse-power portable gasoline engine.

Excelsior Machinery.—George Schussler, 209 Archer avenue, Chicago, Ill., is in the market for excelsior machine.

Flour Mill.—Henderson Milling Co., T. C. Lee, secretary, Monroe, N. C., wants complete outfit for roller mill of 100 barrels capacity, including power plant.

Holsts.—See "Ironworking Machinery."

Ironworking Machinery.—W. F. Bransford, Owensboro, Ky., wants 42-inch cupola, No. 6 exhaust fan (Sturtevant), two-inch bolt cutter, shear to cut 4x4, and lighter, punch to punch one-inch hole in one-half-inch iron or smaller, air compressor, thirty-five to fifty cubic feet per minute; 12-inch air hoist, six-inch air hoist, four-inch air hoist, cupola elevator; second-hand, if in good condition.

Irrigation Equipment.—Illinois Canal & Rice Co., Jennings, La., will be in the market soon for irrigation equipment.

Knitting Mills.—James Smith Woolen Machinery Co., Philadelphia, Pa., wants to correspond with parties relative to contracting by the year for purchasing, according to requirements, hosiery clips and hosiery waste from knitting mills, also cotton cop waste.

Laundry Machinery.—J. R. Leguene, Abbeville, La., wants to correspond with manufacturers of laundry machinery.

Logging Equipment.—J. H. Burgess & Bro., Ramsey, N. C., want dealers' prices on two logging locomotives, with two or three log cars or trucks, something light for wood track to draw about 5000 feet at a load.

Lumber Equipment.—Hardie-Tynes Foundry & Machine Co., Birmingham, Ala., is in the market for fan or blower, capacity two 10-ton cupolas; lathe to turn wheel twenty-six feet in diameter, eight-foot face; two 10-ton electric traveling cranes, two 15-ton electric traveling cranes, two 63-inch cupolas, one 65-inch kilowatt generator, one 20-horse-power electric motor and two five-horse-power motors.

Machine Tools.—See "Ironworking Machinery."

Machine Tools.—Joseph S. Walker, 40 Drayton street, Savannah, Ga., will need machinery for repair shop, including armature winding, etc., and polishing lathe.

Machine Tools.—Dowd & King Supply Co., Charlotte, N. C., wants prices on power pipe-cutting and threading machinery up to ten or twelve-inch; second-hand machines considered.

Matchmaking Machinery.—I. C. Roberts, 479 Freeman street, Norfolk, Va., wants catalogues and prices on machinery for the manufacture of matches.

Mattress, etc., Machinery.—Jas. S. Brown, Pelzer, S. C., wants machinery for making wire springs, woven-wire springs, cots, cotton-felt mattresses, also broom machinery, excelsior plant and engine and boiler of 125 horse-power.

Metal-wheel Works.—G. F. Lyman, 610 Colonial avenue, Norfolk, Va., wants to correspond with manufacturers in reference to making a metal wheel (molded or turned) three-quarters in diameter, three-eighths face.

Mining Machinery.—M. E. Thornton, Hickory, N. C., wants to correspond with parties having machinery for dredging or otherwise obtaining gold and monazite from the sand bed of a small watercourse.

Pipe.—D. W. Parker, Mt. Pleasant, Texas, is in the market for 500 feet each of one-inch, one-and-one-half and two-inch black pipe, new or second-hand.

Piping.—A. C. Moore, president council, Tampa, Fla., wants addresses of makers of cast-iron water piping.

Pulleys.—See "Belt Wheel."

Pump.—J. P. Calloway, Leesburg, Ga., wants a pump to deliver 5000 gallons of water per day from a three-inch well, water level forty feet from surface, delivered cold, steam the motive power.

Pump.—D. W. Parker, Mt. Pleasant, Texas, is in the market for steam pump (duplex preferred), two-inch suction, one-and-one-half-inch discharge. Suction to raise ten feet in sixteen to deliver to tank on raise of thirty feet in 100 feet from pump.

Quarrying Machinery.—S. W. Wood, Plainville, Kans., wants a saw for sawing rock into squares.

Railway Equipment.—Birmingham Railway & Electric Co., Birmingham, Ala., will be in the market for equipment to change 30-mile steam line to electric railway with 60-pound rails.

Railway Equipment.—John F. Grandy, Greenville, S. C., will want 2000 feet 12 to 16-pound steel T rail, second-hand.

Railway Equipment.—See "Logging Equipment."

Road Machinery.—Machinery will be purchased for macadamizing by "County Commissioners," Winston, N. C.

Roofing.—See "Brick Machinery."

Roofing.—W. H. Gibbs & Co., Columbia, S. C., want lowest jobbers' quotations on various lines of roofing delivered f. o. b. Columbia.

Saw-mills.—See "Brick Works."

Steam Plant.—See "Woodworking Machinery."

Steel Discs.—The George Foundry and Machine Works, Rome, Ga., wants the addresses of manufacturers of steel discs.

Steelworking.—Board of awards, Baltimore, Md., will receive proposals until February 20 for furnishing and delivering forty-two pieces of special riveted steel in accordance with specifications on file at office of Chief Engineer C. E. Phelps, Jr., City Hall.

Systems.—See "Calculating Plant."

Vault Door.—Central Manufacturing Co., Roanoke, Va., is in the market for one door for fireproof vault.

Wireworking Machinery.—See "Mattress, etc., Machinery."

Woodworking Machinery.—J. C. Atwood, Mt. Calm, Texas, wants two turning lathes for broom handles.

Woodworking Machinery.—L. Poole, Cuba, Ala., is in the market for planer and matcher 6x16 (second-hand preferred).

Woodworking Machinery.—W. Lee Harbin, Lexington, N. C., wants full equipment for veneering factory, including dry-kiln.

Woodworking Machinery.—J. P. Hornaday, Somerset, Ky., wants machinery for manufacturing furniture and kitchen safes.

Woodworking Machinery.—Grasty Bros., Barboursville, Va., want machinery for manufacturing slack-barrel hoops and locust pins.

Woodworking Machinery.—Murphy & Manning, Knoxville, Tenn., are in the market for a second-hand eight-inch four-sided molder.

Woodworking Machinery.—George Schussler, 209 Archer avenue, Chicago, Ill., is in the market for a full set of stove and heading machinery.

Woodworking Machinery.—Jacob S. Felder, Orangeburg, S. C., wants to correspond with makers of machinery for manufacturing shuttles, bobbins and spools.

Woodworking Machinery.—M. E. Thornton, Hickory, N. C., wants information on manufacture of bobbins, shuttles, spools, etc., and prices on necessary machinery.

Woodworking Machinery.—H. L. Wood Lumber Co., Demopolis, Ala., is in the market for saw and planing-mill machinery and shingle-mill machine, including power outfit.

TRADE NOTES.

Business Chance.—J. W. Coleman & Co., Anniston, Ala., are offering for sale a prosperous hardware store in a business city of 15,000 inhabitants. There are only two houses of this character in the city.

Bethlehem Steel Co.—A. E. Borie has been appointed general sales agent of the Bethlehem Steel Co., with headquarters at South Bethlehem, Pa., the appointment dating from February 1. The company's New York offices are at 100 Broadway.

For Lumbermen.—The Sterling Lumber & Pipe Manufacturing Co. of Hartford, Conn., (with New York and Boston offices) is about to send a mechanical engineer through the South to take orders and make plans for the company's specialty. This specialty is exhaust and blow-pipe system for handling the refuse from woodworking and other machinery. Inquiries are solicited.

Ball Engines.—Exactings buyers of engines find in Ball Engines the qualities they demand in these prime factors for a successful

power plant. Among many orders filed by the manufacturer recently was one for a 300-horse-power cross-compound self-oiling engine from the United Electric Plant, Baltimore, and for a 150-horse-power self-oiling cross-compound engine from a British Columbia mining company. The Ball Engine Co., Erie, Pa., builds Ball Engines.

Progressive Portland Cement Dealers.—One of the most progressive enterprises in its class is the Carolina Portland Cement Co. of Charleston, S. C. Its extensive business, created within ten months, extends over the States of Virginia, Tennessee, Georgia, Alabama, Florida and the Carolinas. The company claims it is conducting the largest Portland cement business in the South. Its line of goods includes all grades of American and Belgian cements, lime, plaster, etc.

Heating, Ventilating, Drying.—These three are closely-allied subjects, and engineers engaged in solving the problems they offer bring to bear all modern knowledge, methods of manufacture and means of installation. The American Blower Co. of Detroit, Mich., is one of the prominent engineering firms engaged in this character of work. This company manufactures the well-known "A B C" Mechanical-Draft Apparatus, besides exhaust fans, dry-kilns, heating apparatus for factories and public buildings, dust separators, steam traps, steam engines, etc.

Special Paint Offer.—Dealers in paints and oils will be interested in a special offer now being made by a prominent paint-manufacturing concern. The company is desirous of introducing its goods in new territory, and is confident that their merits will result in a regular demand. The paints are of all kinds, durable, efficient, and for either outside or inside use on any surface. The Wm. Connors Paint Manufacturing Co., Troy, N. Y., makes the offer in question, and invites inquiries. The company also grinds fine colors, siennas, ochres, white lead, zinc, etc.

Iron Work of All Kinds.—The industrial development of the South calls for a considerable amount of iron work of all kinds, and manufacturers of different sections are constantly obtaining orders. Littleford Bros. of Cincinnati, Ohio, are engaged in this line of work, and are prepared to submit estimates to inquirers. They are manufacturers of all kinds of special steel and iron work, such as smokestacks, steel tanks for water, oil, etc., and all kinds of special and general sheet-iron work required in factories. The firm also has facilities for erecting tanks and building stacks in the Southern States, and can enter into competition with most of the cities North.

Kentucky Electrical Co.—This representative Southern enterprise is busily engaged in attending to the wants of its numerous customers. Its list of customers constantly increases because of the uniform satisfaction derived from the use of the incandescent lamps, motors and dynamos manufactured by the Kentucky Electrical Co. at Owensboro, Ky. During the past two months this business has increased 150 per cent., and the plant is running twelve and one-half hours each day in order to keep pace with orders. The company calls especial attention to the fact that it is not in the lamp combine recently announced, and former prices prevail.

Hardwood Flooring.—During recent years there has been an ever-increasing demand for hardwood flooring, not only in dwelling-houses, but also in factories of different kinds. Southern cotton mills especially have become interested in this flooring, and many of them have contracted for it in their new buildings. Maple flooring especially has become very popular, and the T. Wilce Co. of Chicago makes a specialty of it. This company has undertaken and completed large contracts throughout the North, especially in the cotton mills. Especial attention is given to the requirements of Southern territory, and inquiries are invited from those who may be interested. Manufacturers or contractors can obtain estimates on request.

New Tinplate Works.—The demand for tinplate in its various forms continues, and the manufacturers in this branch of industry are busily engaged. The N. & G. Taylor Co. of Philadelphia is prominent in tin manufacture, and its plant is conceded, so the company states, the finest in the world. The demand for Taylor product has increased to such an extent during recent months that important improvements and enlargements were necessitated to meet the demand. These improvements included a machine shop with modern tools and machinery, two tinning stacks, making twenty-five in all, and a new building for assorting and ware-

house department. The recent large additions to the company's rolling mills at Cumberland, Md., also improve the facilities.

Slate as Roofing.—Each year slate is being more and more utilized as a roofing and for various other purposes. As a roofing slate has been used in the older countries for centuries, and as its manifold merits become better known this use will increase in modern countries until slate will be the general roofing instead of the exceptional. The mining and manufacture of slate into marketable form for the contractor, builder, roofer and other users has been the especial work of the Bangor Excelsior Slate Co. for many years, and this brand has become known for its eminent qualities wherever slate is used. The best-known slate quarries of America include the Bangor Excelsior, American Bangor and Star at Bangor, Pa., and the Albion at Pen Argyl, Pa., operated by the Bangor Excelsior Slate Co. and the American Slate Co., both of Easton, Pa. The Genuine Bangor Slate Co., Easton, Pa., has been appointed exclusive selling agent for the product of the quarries mentioned. This company has for its president R. S. Brown, who has been for many years president and the guiding hand in the success attained by the Bangor concern. Inquiries are invited.

Hand-Power Rock Drill.—Miners, prospectors and other engaged in work requiring the use of drills will be interested to know of a hand-power rock drill that has proven eminently successful. This drill is essentially a mining drill, and is designed to meet all requirements for tunneling, drifting, sinking and stopping. It may also be used to great advantage by railroad and ditch contractors, and in stone-yards and quarries. This tool is the Jackson Hand-Power Rock Drill, H. D. Crippen, sole licensee and manufacturer, 52 Broadway, New York. Some remarkable records have been made by the Jackson drill. A Wyoming miner writes the manufacturer that he has "been using the drill since December 24, running same 150 feet under ground in one of the hardest of granites, in which men (double-handed) do well to make five or six inches per hour. One man with the Jackson drill is now doing from eighteen to twenty inches per hour. The drill runs like clock-work, and is easy to handle." A user in Utah writes: "I am well pleased with the drill. I have been doing my work by contract, and after one week's trial of the machine the party having contract took a new one at 30 per cent. reduction in the price from what I had been paying." Other users testify to the merits of the drill in equally strong terms.

TRADE LITERATURE.

Wheelbarrows and Trucks.—A varied line of barrows and trucks is shown on the colored sheet issued by Pugsley & Chapman, 180 West street, New York. Trucks and wheelbarrows for every purpose are shown.

Hot-Blast Heating.—"In hot-blast heating the proportional heating surface is generally expressed in the number of net cubic feet in the building for each lineal foot of one-inch steam pipe in the heater. On this basis, in factory practice, with all of the air taken from out of doors, there is generally allowed from 100 to 150 cubic feet of space per foot of pipe, according as exhaust or live steam is used, the term 'live steam' being taken in its ordinary sense as indicating steam of about eighty pounds pressure. If practically all of the air is returned from the building, these figures will be raised to about 140 as the minimum, and possibly 200 cubic feet as the maximum, per foot of pipe. The larger the building in cubic contents the less its wall and roof exposure per foot of cubic space, and consequently the less the loss of heat and the smaller the heater relatively to the cubic contents. In buildings used for manufacturing, where the occupants are usually well scattered, an air change once in fifteen to twenty minutes represents the general practice, but in public and similar buildings this change is of necessity reduced to one in seven to twelve minutes. Owing to the increased loss of heat by leakage or ventilation under such conditions, and also to the demand for a slightly higher temperature than in the shop, the allowance is dropped to from 70 or 75 to 225 cubic feet of space per foot of pipe, for all the air is taken from out of doors and low-pressure steam is usually employed. The great range in all of these figures must make evident the influence of the size, construction and uses of a building upon the size of the apparatus required, and show the necessity of extended experience for the proper designing of any system of heating and ventilation."—Extract from treatise on ventilation and heating by B. F. Sturtevant Co., Boston.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

A \$15,000,000 Bond Issue.

The executive committee of the board of directors of the Baltimore & Ohio Railroad Co. announces that it has been decided to issue \$15,000,000 in bonds, which will bear interest at 4 per cent. They are to extend over a period of ten years, and are to be sold for construction purposes and for additions to the property, according to the announcement. A syndicate has been formed which will purchase at par any portion of the issue not taken by February 28.

New Corporations.

James T. Harris is interested in the formation of a bank at Spartanburg, S. C.

C. J. Dunn and others have organized the Bank of Oglethorpe, Ga., capitalized at \$25,000.

John A. Phillips is interested in a State bank being organized at Fitzgerald, Ga., with \$25,000 capital stock.

H. Ausley is interested in the formation of a banking house at Statesville, N. C., with \$25,000 capital stock.

J. S. Jones and others are interested in the Nashville Security Co. of Nashville, Tenn., chartered with \$7500 capital stock.

H. K. Garrison of Camden, S. C., is interested in the Bank of Bishopville, recently commissioned, with \$25,000 capital stock.

The People's Bank, recently organized at Sylvania, Ga., has elected J. W. Brown, president, and W. J. Cannon, cashier.

The Southwest Virginia Trust Co. has secured a charter to begin business at Roanoke, Va. It is capitalized at \$100,000.

A commission has been granted to Walter S. Gray and others to organize the Bank of Woodruff, S. C., with \$50,000 capital stock.

The Security Company of Portsmouth, Va., has been formed to do a financial business, with \$5000 capital stock. L. N. Land of Portsmouth is president.

Z. T. Matthews is president, and W. T. Love, vice-president, of the Jonesboro Savings & Trust Co., organized at Jonesboro, Ark., with \$50,000 capital stock.

B. F. Mauldin has been elected president, and J. A. Bird, secretary and treasurer, of the bank recently organized at McCormick, S. C., capitalized at \$25,000.

J. F. Gordon has been elected president, and W. J. Cox, vice-president, of the Kentucky Bank & Trust Co. at Madisonville, Ky. A branch will also be established at Erlington.

A correspondent of the Manufacturers' Record writes that a national bank will probably be organized at Patterson, La., in the near future. S. R. Guyther can probably give further information.

The savings bank in which W. J. Dangaix of Birmingham is interested is to be called the Birmingham District Savings Bank, and is to be capitalized at \$50,000. Mr. Dangaix has been elected president; J. A. Vanhoush, vice-president, and Geo. D. Reynolds, cashier.

The People's Trust Co., which was chartered at the last session of the Maryland legislature, has organized, with \$2,500,000 capital stock. Edgar K. Legg and O. C. Martenet are among the directors. The company will absorb the business of the Union Savings Bank of Baltimore, and will have its offices at Baltimore.

Authority has been given to organize the First National Bank of Trenton, Texas, with \$25,000 capital stock. J. R. Robinson is one of the directors. The Farmers and Merchants' National Bank of Gilmer, Texas, has also been authorized to begin business with \$50,000 capital stock. Among those interested is W. O. Boyd.

New Securities.

The Fairmount Mills Co. of Spartanburg, S. C., has decided to increase its capital stock to the extent of \$50,000.

The city of Dublin, Texas, is considering the issue of \$17,000 in 6 per cent. bonds for school purposes. Address the mayor.

Bills are pending in the Tennessee legislature authorizing Claiborne county and Collierville to issue bonds for various purposes.

A bill in the State legislature authorizes the town of Tullahoma, Tenn., to issue \$10,000 in bonds for improvements. The town clerk may be addressed.

A bill is pending in the North Carolina legislature authorizing the town of Franklin to issue bonds for various purposes. The mayor may be addressed.

Polk county, Tennessee, may issue \$75,000 in bonds if authority is given by the legislature. The county court may be addressed at Benton, Tenn.

The town of Ravenswood, W. Va., will probably place on the market \$7000 in 4 per cent. bonds for improvements in the near future. Address the mayor.

The city of Atlanta, Ga., will vote on March 20 to decide the proposed issue of \$200,000 in 3½ per cent. bonds for improvements. Address the mayor.

The school district of Clarendon, Texas, will probably issue \$10,000 in 5 per cent. bonds. The school board may be addressed at the town of this name.

The Export Coal & Railway Co. of Bessemer, Ala., has decided to increase its capital stock from \$30,000 to \$100,000, and to issue \$50,000 in 5 per cent. bonds.

The town of Somerville, Tenn., will probably place on the market in the near future an issue of \$5000 in improvement bonds. The town clerk may be addressed.

The Bankers' Trust Co., which is doing business in Atlanta, has decided to increase its capital stock from \$100,000 to \$150,000. Robert H. Jones of Atlanta is president.

The issue of \$40,000 in bonds of Charlotte, N. C., has been sold to Messrs. Shepherd & Co. of New York at a premium of 2½ per cent. They bear interest at 4 per cent.

The board of supervisors of Jackson county, Mississippi, have decided to issue \$10,000 in 5 per cent. bonds for improvements. The board may be addressed at Scranton, Miss.

Bids will be received until February 20 for the issue of \$70,000 in bonds of Helena, Ark., to be used for improvement purposes. G. T. Hargraves may be addressed at Helena.

The stockholders of the Old Town Bank of Baltimore have determined to double the present capital stock, making it \$300,000. It will probably be changed to a national bank.

Bids will be received until March 1 for the issue of \$186,000 in refunding bonds of the city of Lynchburg, Va. Bids may be addressed to Camillus Christian, chairman of finance committee.

Arrangements have been made to construct a large hotel at Charleston, S. C. The financial plan includes the issue of \$350,000 in 6 per cent. bonds. It is stated that over \$50,000 of the issue has been taken by local capitalists, and that the success of the enterprise is insured.

Hawkins and Hamilton counties, Ten-

nessee, will probably issue bonds for various purposes if authority is received from the State legislature. The county court of Hamilton may be addressed at Chattanooga, Tenn., and the county court of Hawkins county at Rogersville, Tenn.

Financial Notes.

The Fidelity Trust & Deposit Co. of Baltimore has decided to open a foreign office at London, which will be in charge of Mr. Stephen W. Gambrill.

Arrangements have been made to organize a clearing-house at Wheeling, W. Va. Robert C. Dalzell has been elected president; George Hook, vice-president, and Alexander Mitchell, manager. The Mutual Savings Bank of Wheeling will be used as the medium of the clearing-house.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending February 12.

Abbeville Cotton Mills (S. C.)	98
Alken Mfg. Co. (S. C.)	94 97½
American Spinning Co. (S. C.)	102½
Anderson Cotton Mills (S. C.)	124 135
Arcade Cotton Mills (S. C.)	100
Arkwright Mills (S. C.)	118 123
Augusta Factory (Ga.)	83½ 87½
Avondale Mills (Ala.)	85 87½
Belton Mills (S. C.)	102 106
Bennettsville Mfg. Co. (S. C.)	105 110
Cabarrus Cotton Mills (N. C.)	150
Cannon Mfg. Co. (N. C.)	180 190
Clifton Mfg. Co. (S. C.)	183 188
Clinton Cotton Mills (S. C.)	120
Courtenay Mfg. Co. (S. C.)	117 120
Darlington Mfg. Co. (S. C.)	96 100
Delgado Mills (N. C.)	97½ 102½
Eagle & Phenix Mills (Ga.)	102
Edna Cotton Mills (N. C.)	120 125
Enoree Mfg. Co. (S. C.)	117 120
Enterprise Mfg. Co. (Ga.)	101 103
F. W. Poe Mfg. Co. (S. C.)	120 125
Gaffney Mfg. Co. (S. C.)	117 122
Granby Mills (S. C.)	101
Granby Mills (S. C.) 1st Pfd.	101 106½
Graniteville Mfg. Co. (S. C.)	100 103½
Greenwood Cotton Mills (S. C.)	99 102½
Grendel Mills (S. C.)	102
Henderson Cotton Mills (N. C.)	120 125
Henrietta Mills (N. C.)	200 210
John P. King Mfg. Co. (Ga.)	100 103
Langley Mfg. Co. (S. C.)	115 120
Laurens Cotton Mills (S. C.)	140
Lockhart Mills (S. C.)	108 110½
Louise Mills (N. C.)	104
Lynchburg Cotton Mills (Va.)	125 150
Lynchburg Cotton Mills (Va.) Pfd.	145 150
Manchester Cotton Mills (S. C.)	106
Mayo Mills (N. C.)	120
McColl Mfg. Co. (S. C.)	120 125
Modena Cotton Mills (N. C.)	140 145
Newberry Cotton Mills (S. C.)	115 122
Odell Mfg. Co. (N. C.)	106 111
Orr Cotton Mills (S. C.)	104 106
Paclet Mfg. Co. (S. C.)	200 215
Pelzer Mfg. Co. (S. C.)	180 190
Piedmont Mfg. Co. (S. C.)	178 185
Raleigh Cotton Mills (N. C.)	115
Richland Cotton Mills (S. C.)	105
Richland Cotton Mills (S. C.) Pfd.	100 105
Roanoke Mills (N. C.)	110
Sibley Mfg. Co. (Ga.)	80 89
Southern Cotton Mills (N. C.)	97½ 102
Spartan Mills (S. C.)	125 135
Trion Mfg. Co. (Ga.)	125
Tucapau Mills Co. (S. C.)	135
Union Cotton Mills (S. C.)	128
Union Cotton Mills (S. C.) Pfd.	102 106
Victor Mfg. Co. (S. C.)	106
Warren Mfg. Co. (S. C.)	85 93
Warren Mfg. Co. (S. C.) Pfd.	104 107
Whitney Mfg. Co. (S. C.)	117 127
Wilmington Cot. Mills (N. C.) Pfd.	110 115
Wiscasset Mills (N. C.)	120

Graphite Lubrication.—Probably there is no substance known so smooth as pure graphite. It is claimed to be the best solid lubricant known in science and practice. Graphite as a lubricant, scientifically and practically considered, also its manifold usefulness as an auxiliary for engineers and mechanics, is the subject treated in a pamphlet just issued by the Joseph Dixon Crucible Co., Jersey City, N. J. This publication is practically an old friend in a new dress, but it contains some new thoughts as to the value of graphite.

Filtration of Defecated Cane Juice.—Considerable losses occur in plantation sugar-houses and sugar refineries while manipulating sugar juices, or syrups, in their fluid state. This loss, which is from fermentation and inversion, can be reduced to a minimum by the use of the proper mechanical apparatus. This apparatus is offered in the Johnson Hydraulic Joint Sugar Filter. Messrs. John Johnson & Co., 95 Liberty street, New York, build and offer this machine. Their filters and filter presses are well known to the trade, and the demand is increasing constantly. Descriptive pamphlet is ready for those interested.

For Boiler Users.—Boiler users are presumably always prepared to be informed of any device that will increase the efficiency of their plants, certainly progressive users are. To such is directed a booklet recently

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issued concerning what is popularly known as "A Good Thing." Feed-water heaters are treated of in this publication, and the points of excellence shown in the Webster type of feed-water heater are of interest to every one having or likely to have use for such a device. Warren Webster & Co., Camden, N. J., issues the booklet. Its contents tell of the quality and results obtained by the use of the Webster Feed-Water Heater. The book is in fact a regular out-and-out talk regarding heaters in general, and indicates to the discerning that the Webster type in particular leads competitors. Pertinent facts regarding tests are presented in convincing form. Send for booklet.

Florida—Two Weeks' Tour via Pennsylvania Railroad.

The second Pennsylvania Railroad tour of the season to Jacksonville, allowing two weeks in Florida, will leave Baltimore February 19.

Excursion tickets, including railway transportation, Pullman accommodations (one berth) and meals en route in both directions while traveling on the special train, \$48.

For tickets, itineraries and other information apply to ticket agents, B. Courlander, Jr., Passenger Agent, Baltimore District, Baltimore, Md., or to Geo. W. Boyd, Assistant General Passenger Agent, Broad Street Station, Philadelphia.